NOVEXX SOLUTIONS

USER MANUAL

XTP 604

Tag printer



Edition 2 - 2/2025

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Please note!

GENERAL NOTES

Validity of this manual and required compliance

Contents

The complete operating manual for the label printer XTP 604 (also referred to in the following as “machine” or “printer”) consists of the following parts:

Manual	Target group	Medium	Availability
Safety notes	Operating personnel	Printed	Comes with machine
User manual		PDF file	NOVEXX Solutions web page www.novexx.com
Service manual	Service personnel		NOVEXX Solutions Partner Portal www.partner.novexx.com
Spare parts catalog			

This user manual refers exclusively to the machine types named above. It is used for proper operation and adjustment of the machine.

The machine must be properly installed and configured to allow for operation and settings.

- For information about the required qualification, see chapter Qualifications required on page 8.
- For information about installation and configuration, refer to the service manual.

For technical questions not covered in this user manual:

► Follow the instructions of the service manual for the machine

or

► Request a service technician from our sales partner.

Our sales partner's customer service department is available especially for configuration settings and malfunctions.

Technical release

Technical release: 7/2024

Software version: BEL-V7.T22850

Liability

Novexx Solutions reserves the right:

- to make changes in design, parts and software and to use equivalent parts instead of those specified for the purpose of technological progress.
- to change information in this manual.

Any obligation to extend these changes to machines previously delivered is excluded.

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How information is represented

Explanation of symbols

To enhance readability and make information easier to find, different types of information are identified:

► Instruction with no order of tasks assigned

1. Numbered instructions introduced by preceding text
2. The specified order must be followed!

‖ Note. ‖

- Enumeration of features
- Other feature



The Experts symbol identifies activities that are reserved exclusively for qualified and specially trained personnel.

Warning Notes

Warning notes are specially highlighted:



WARNING!
Warning notes with the signal word WARNING refer to risks that can result in severe or fatal injuries! The note contains safety measures to protect affected persons.
► Instructions must be followed without exception.

CAUTION!
Warning notes with the signal word CAUTION refer to risks that can result in property damage or personal injury (minor injuries). The note contains instructions for preventing damage.
► Instructions must be followed without exception.

Illustrations

Illustrations appear in the text where required. References to the illustrations are shown in brackets, if necessary (see table).

Reference to illustration	Application
none	• Only one illustration • Reference to the illustration is obvious • No position number in the illustration
(A)	• Only one illustration • Reference to the illustration is obvious • Position number in the illustration
(see fig. above)	• Several illustrations • No position number in the illustration
(see fig. above, pos. A)	• Several illustrations • Position number(s) in the illustration

Table 1: Different references to illustrations.

Parameters

Parameters in the parameter menu are represented in the format Menu name > Parameter name in grey type.

SAFETY INSTRUCTIONS

Intended use

The label printer XTP 60x is designed for printing label material, using the thermal or thermal transfer printing process. It is possible to use a wide range of label materials and thermal transfer ribbons. Label stock must be available as a stack.

Observe the technical specifications of the printer, see chapter Technical Data. Any other type of or more extensive application will be considered *abnormal use*.

Operating position: The XTP 60x is a desktop printer. The intended use position is as shown standing on a firm, flat, horizontal surface (e.g. on a table).

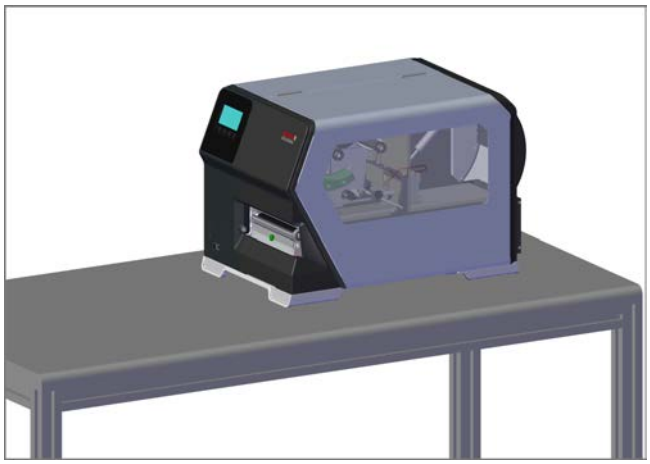


Fig. 1: Operating position of the XTP 60x with basic loader.

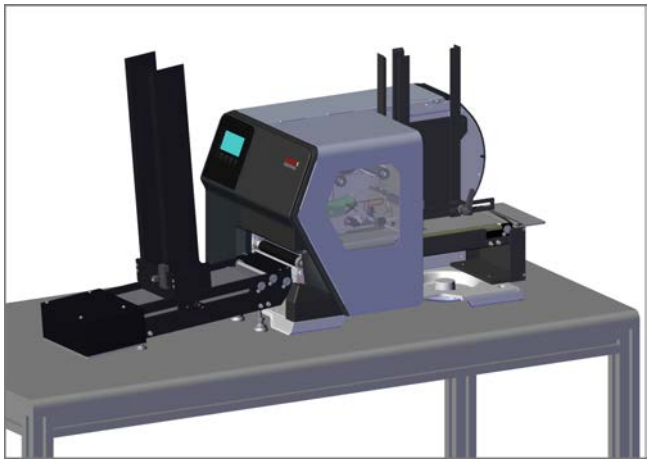


Fig. 2: Operating position of the XTP 60x with extended loader.

NOVEXX Solutions shall assume no liability for damage resulting from non-intended use of the machine.

Safety notes

Follow the instructions

Safe and efficient operation of the printer can only be guaranteed if you observe all necessary information.

- Before operating the printer, read the operating instructions and all other notes carefully.
- Observe the additional safety and warning notes on the printer.

Qualifications required

- Trained staff is required for inserting and changing foils and material.
- Users need to be instructed in the use of the printer so they can work safely and independently.
- Users should be able to resolve minor operational issues and faults by themselves.
- At least two users should be instructed.

Requirements for safe operation

- Only use the printer in enclosed areas with environmental conditions matching the values given in the technical specifications!
- Only operate the printer on a plane, solid support.
- Make sure that the power supply socket for the printer is readily accessible!
- Only trained and authorized personnel should operate the printer!
- During operation, the print head can become hot! Care should be taken when touching the print head!
- Do not make any modifications or any additional casing for the printer!
- Do not allow any liquids to enter into the printer!
- Repairs to the printer may only be performed by authorized specialists who are aware of the risks involved!

- Lay the power supply cable, data cables and compressed air hoses (if applicable) in a way that nobody can stumble over it.
- In case of emergency, switch off the printer and disconnect the power supply cable!
- Only use original accessories!

Protection against injuries by electrical current

- Only operate the printer using the system voltage indicated on the rating plate!
- Only connect the printer to a grounded power socket fitted to authorized standards!
- Connect only devices to the interfaces at the printer that fulfil ES1 circuit requirements according to EN 62368-1!

Protection against injuries by mechanical action

- Only operate the printer when the cover is closed!
- (XTP 604 mit Jumbo-Lader, i. e. with hood open at the side) Do not reach under the hood at the side!
- Don´t wear *loose* long hair (if necessary, wear a hairnet).
- Keep loose jewellery, long sleeves, etc. away from rotating parts of the printer!
- Be careful when sliding on/removing the ribbon rolls! There are *sharp-edged clamping plates* on the ribbon mandrels. Danger of cuts!

Warning notes on the machine

CAUTION!
Warning notes on the machine provide important information for the operating personnel.

► Do not remove warning notes.
► Replace missing or illegible warning notes.

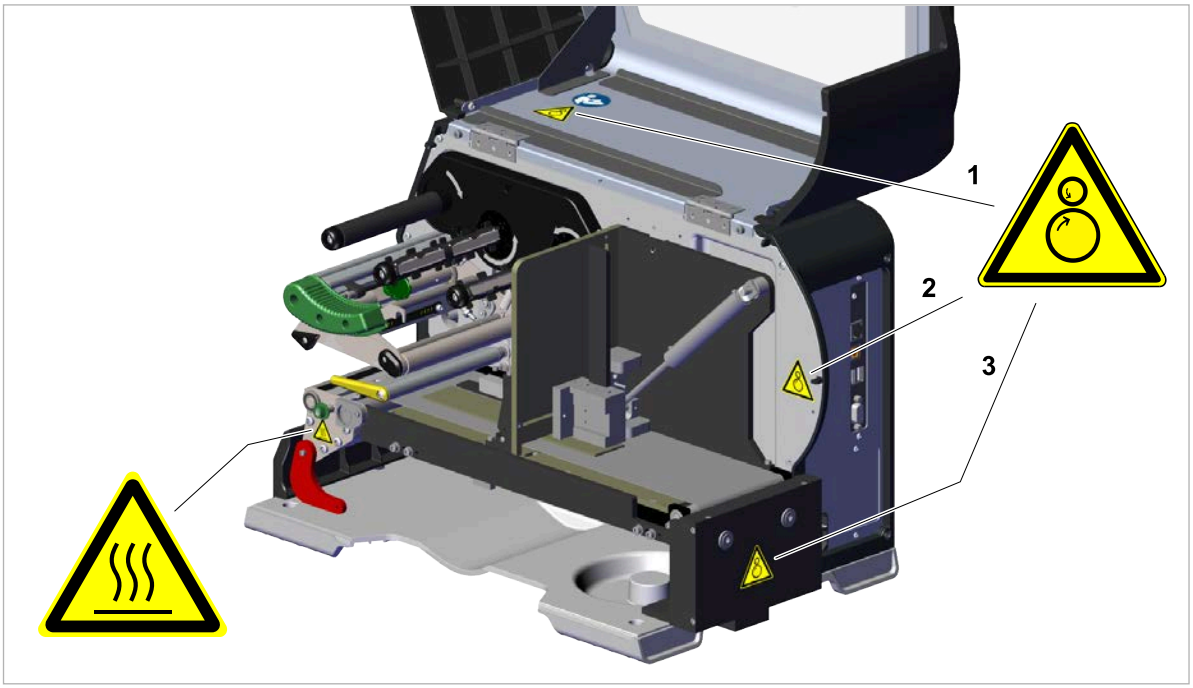


Fig. 3: Warning notes on the XTP 60x with basic loader.

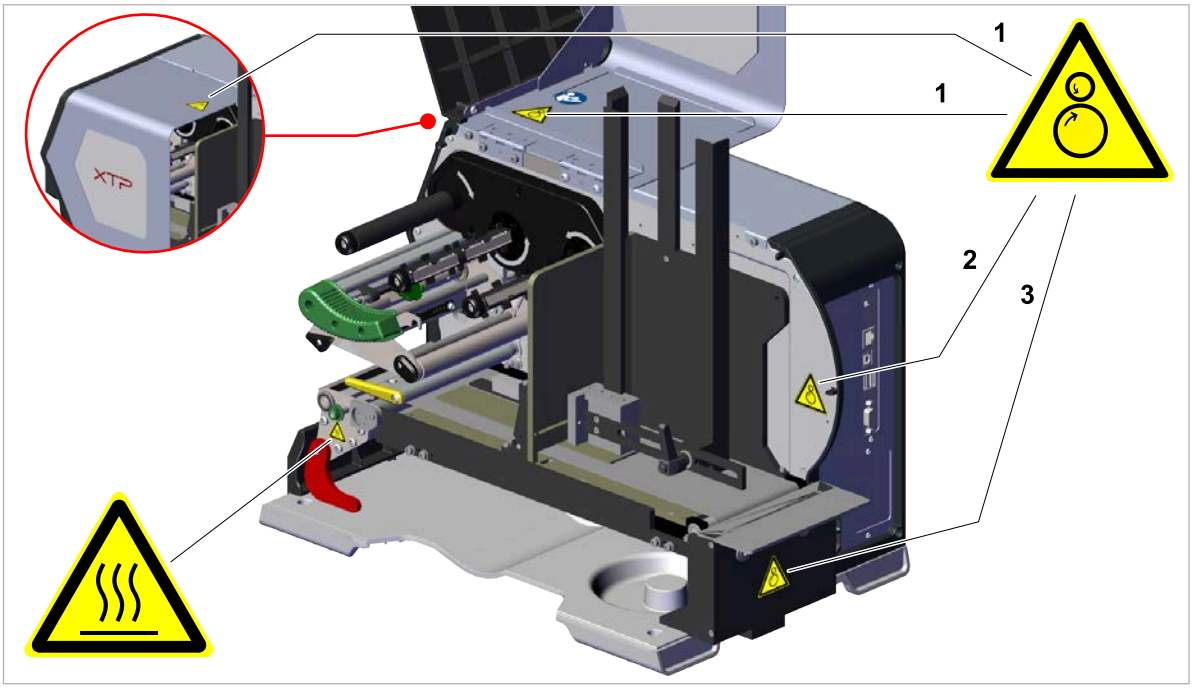


Fig. 4: Warning notes on the XTP 60x with extended loader.

Warning note	Meaning	Article no.
	The “Pinch point” warning note warns of the danger posed by the machine´s rotating parts; they can trap items and draw them in. • 1: Warning of risk of being drawn in by rotating ribbon mandrels, ribbon roller, print roller. • 2, 3: Warning of pull-in hazard on the conveyor belt.	A5346
	The “Hot surface” symbol warns of a burn hazard if the surface is touched. Allow the machine to cool off before touching it.	A5640
	The blue label “Read manual” demands that operators read the user manual.	A5331

Product Description

TECHNICAL DATA

Dimensions | Connection Data | Ambient Conditions

Dimensions

- Measures:
  - *XTP 604 “Basic” with basic loader*: 496 x 312 x 330 mm
  - *XTP 604 “Basic” with extended loader*: 531x 377 x 430 mm

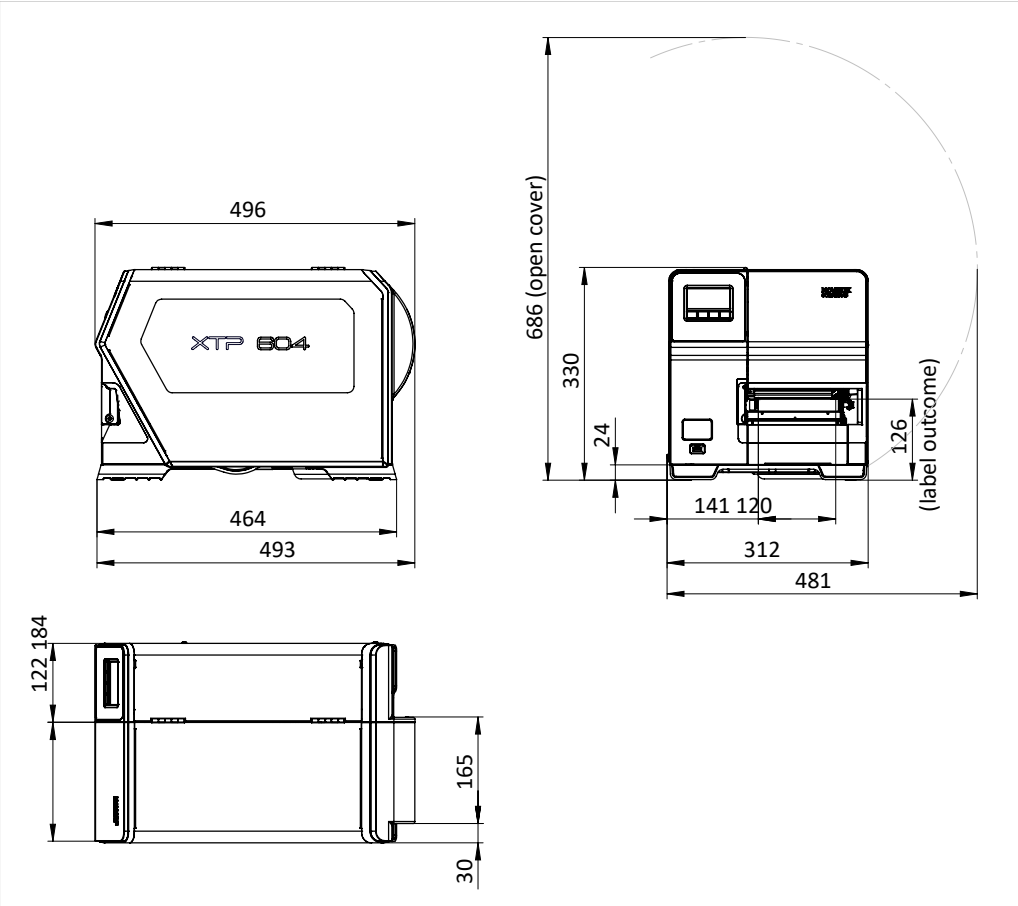


Fig. 5: Measures of the XTP 604 “Basic” with basic loader.

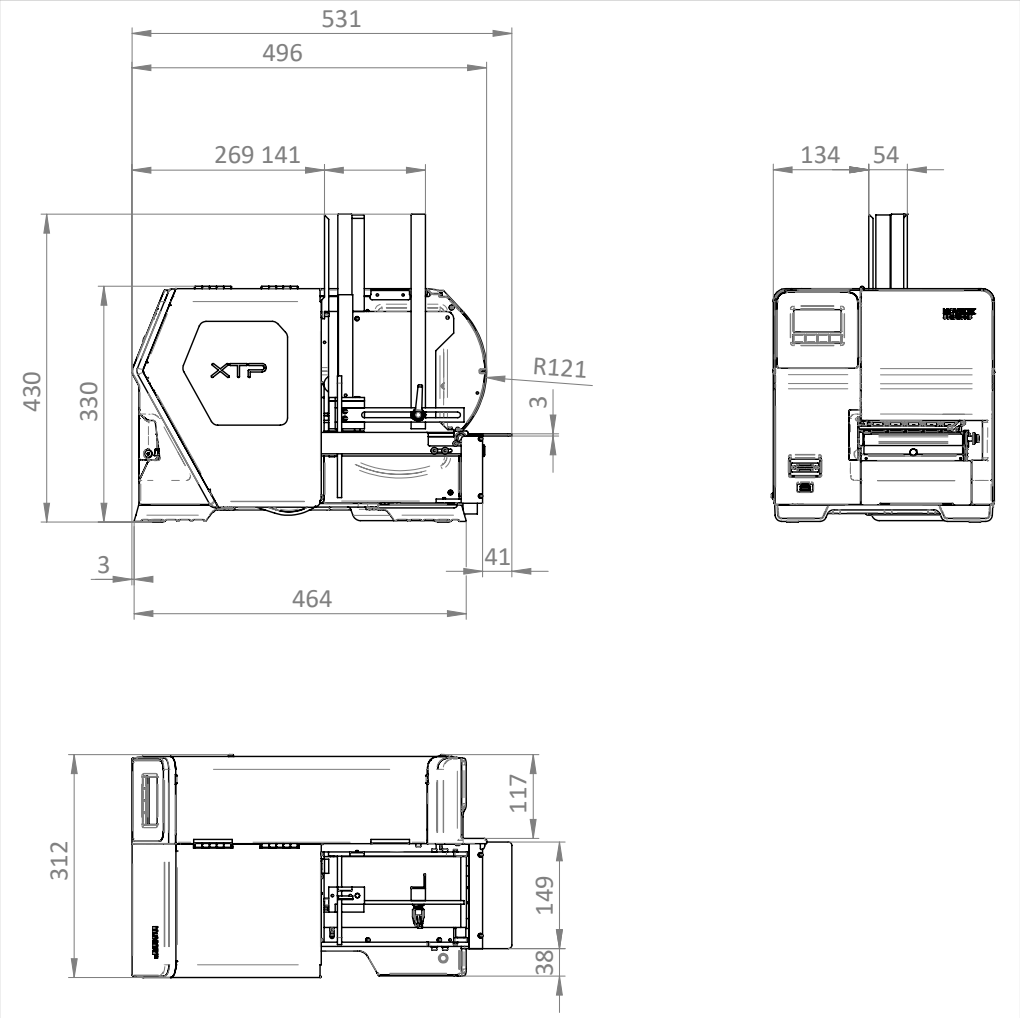


Fig. 6: Measures of the XTP 604 “Peripheral” mit Jumbo-Lader.

Connection data

Protection category	I
Mains voltage	100 -240 V (AC)
Input current	3.9 - 1.9 A
Mains frequency	60 /50 Hz

Ambient conditions

Installation location	• Inside buildings • Protected from wind and spray water • Dry • Not in areas with potentially explosive atmosphere
Operating Temperature	+5 to +40°C
Storage Temperature	-20 to +70°C

Relative Humidity	20 to 85%, non-condensing
Protection category	IP 21
Noise	70 dB(A)
Sea level	Operation to max. 2000 m above sea level Transportation to max. 8000 m above sea level

Label Material

> The properties of individual tags vary greatly in terms of size, thickness, flexibility and surface finish, for example. A reliable statement as to whether a particular label can be transported and printed with the XTP 604 can only be made after a preliminary test.

Material types

Card and synthetic materials, suitable for printing in thermal direct process and thermal transfer process, as individual labels in stacks.

Material weight

max. 240 g/m^2

Material thickness

max. 0.28 mm

Material measures

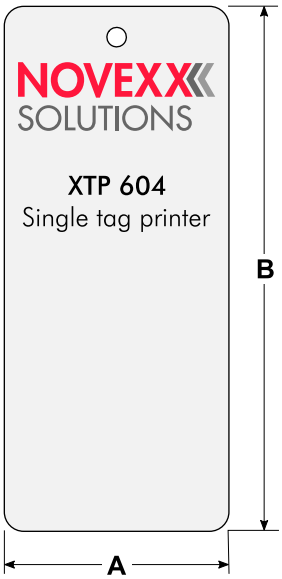


Fig. 7: **A** Label width, **B** Label length (corresponds to the setting in Print > Material > Label > Material length)

Machine	Material width	Label length
XTP 604	30-77 mm	55-175 mm

Machine	Material width	Label length
With optional stacking guide for wide labels	45-96 mm	55-175 mm

Table 2: Label measures.

Stack height

Printer	max. stack height
XTP 60x with basic loader	approx. 100 mm
XTP 60x with extended loader	approx. 300 mm

Thermal transfer ribbon

Specifications of suitable thermal transfer ribbon (“ribbon”).

Ribbon type

Regarding thermal transfer ribbon, the following is recommended:

- the reverse side of the ribbon must have an antistatic, friction-reducing coating (backcoating).
- ribbons must be specified for corner edge type print heads.
- ribbons should be suitable for print speeds of up to 16 inch/sec. (400 mm/s).

Ribbon roll

Variable	Dimension
Outer Ø	max. 105 mm
Length	max. 600 m
Core inside Ø	25.4 mm (1“)
Width [1]	25-110 mm

Table 3: Dimensions of usable ribbon rolls.

Perfomance Data

Print head

- *Print technology*: Thermal direct or thermal transfer printing
- *Print head type*: Corner Edge
- *Print head characteristics*:

Machine	Resolution (Dot/mm)	Resolution (dpi)	Print width(mm)
XTP 604	12.0	300	106

1 As a general rule, the thermal transfer ribbon must overlap the label being printed on both sides by 2 mm.

Print speed / Label rate

Machine	Print speed (mm/s)	Print speed (inch/s)
XTP 604	75-400	3-16

> Recommended print speed: 200 mm/s (8 inch/s).
>
> Label rate: The number of labels that can be processed per minute depends heavily on the properties of the label material. A test showed a rate of approx. 90 labels per minute for a 167 mm long label printed at a speed of 200 mm/s.

Impression accuracy

- In printing (y-) direction:

  The impression accuracy depends on the print position. With the printout starting directly at the punch position, the accuracy is ±0.5 mm. A distance between punch (that is label start) and print position will add ±1% of this distance to the accuracy fault (fig. below)

- X-direction: ± 0.5 mm

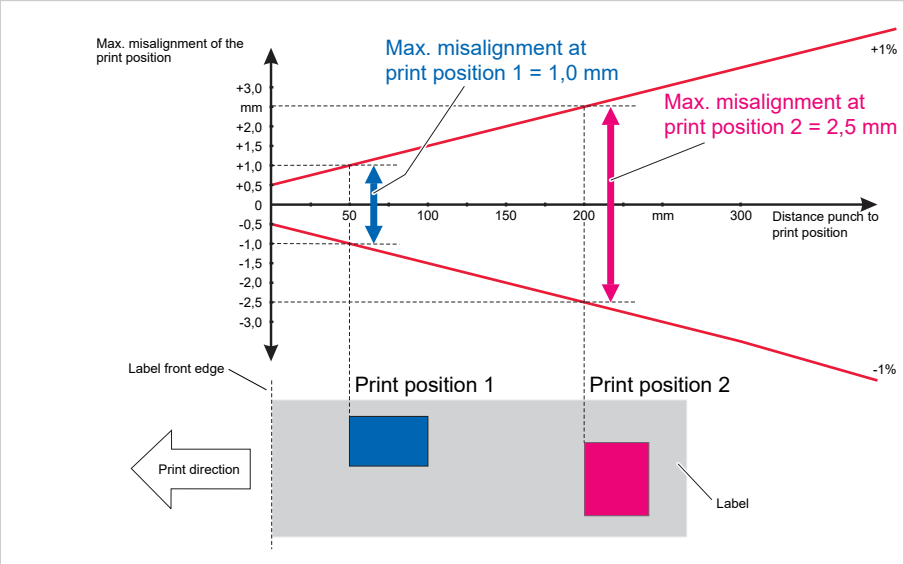


Fig. 8: Impression accuracy in printing direction, depending on the printing position.

Label sensor

Light-transmission sensor, setting range: 2-64 mm

Output modes

1:1 and 100% printable.

Non-printable areas:

- 1 mm from the front label edge (1st edge in feed direction)
- 1 mm from the left band border (right border in feed direction)

Printer language interpreter

Easy Plug, Line Printer, Hex Dump, ZPL

Character sets

- 17 character sets with fixed size (fixedfonts) including OCR-A and OCR-B
- 3 Scalable character set (speedo fonts)
- TrueType character sets are supported (in Unicode as well)
- TrueType, speedo and fixed size fonts can be optionally stored on an external memory medium.

Character modification

- Scaling in X/Y direction
  - Fixfonts up to factor 16
  - Speedo fonts up to 6000 pt
- Rotation:
  - Resident fonts, bar codes, lines and graphics: 0, 90, 180, 270 degrees
  - Truetype fonts: 0 to 359.9 degrees

Bar codes

Codabar	Code 128 A, B, C
Code 128	Code 128 UPS
Code 128 Pharmacy	ITF
Code 2/5 Matrix	MSI
Code 2/5 Interleaved	EAN 8
Code 2/5 5-line	EAN 13 add-on 2
Code 2/5 Interleaved ratio 1:3	EAN 13 add-on 5
Code 2/5 Matrix ratio 1:2,5	EAN 128
Code 2/5 Matrix ratio 1:3	Postcode (guide and identity code)
Code 39	UPC A
Code 39 extended	UPC E
Code 39 ratio 2,5:1	Code 93
Code 39 ratio 3:1	

All bar codes scalable in 30 different width and in the height

2-dimensional bar codes

Aztec
Codablock F
Code 49
Data Matrix Code (code according to ECC200)
Maxi Code
PDF 417
QR Matrix Code

GS1 Databar & CC bar codes

Reduced Space Symbology (GS1 Databar) and Composite Component (CC) bar codes:

GS1 Databar-14	UPC-A + CC-A/CC-B
GS1 Databar-14 truncated	UPC-E + CC-A/CC-B
GS1 Databar-14 stacked	EAN 13 + CC-A/CC-B
GS1 Databar-14 stacked omnidirectional	EAN 8 + CC-A/CC-B
GS1 Databar limited	UCC/EAN 128 + CC-A/CC-B
GS1 Databar expanded	UCC/EAN 128 + CC-C

Interfaces & Electronics

Interfaces

- Data interfaces:
  - *Network*: Ethernet 10/100/1000
  - *USB host* (Typ A): USB 2.0, 2x rear, 1x front
  - *USB device* (Typ B): USB 2.0
  - Serial: RS232, DSub 9
- Signal interfaces:
  - *BasicIO board* (optional): 3 M12 connections with 4 inputs, 4 outputs, PNP configuration, 24 VDC, JSON configurable, 20 W max. output power
  - *Basic-USI* board (optional): Sub-D15 connector with 4 inputs, 7 outputs, NPN configuration, 24/5 VDC, 20 W max. output power
  - *8IO board* (optional, only in combination with a BasicIO or Basic-USI board): 2 M12 connections with 8 inputs, 8 outputs, PNP configuration, 24 VDC, JSON configurable

Electronics

Characteristic	Details
Processor	32-bit ARM Cortex-A9 CPU (NXP)
RAM	1 GB DDR3
eMMC	2 GB pSLC
Realtime clock	Standard

Certificates and Markings

CE, TÜV-Mark, $_{C}$TÜV$_{US}$ -Mark, FCC, EAC, CCC

The regulation EN 55032 demands for class A devices the following text to be printed in the manual:

„WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.“

DESIGN MODELS

Printer versions

The XTP 604 is available in the following versions:

- XTP 604 “Basic” with basic loader
- XTP 604 “Basic” with extended loader
- XTP 604 “Peripheral” with basic loader
- XTP 604 “Peripheral” with extended loader

Version	Features
“Basic”	No connection for peripheral devices on the front
“Peripheral”	Sub-D connection for an external stacker
with basic loader	Small label magazine that fits into the printer housing. A stacking guide for wider labels can be installed as an option.
with extended loader	Large label magazine that protrudes from the printer housing. This is why the front cover is shortened.

In addition, the XTP 604 can be equipped for the respective application by installing various options or retrofit kits (see the following chapter).



Fig. 9: External distinguishing feature: the “Peripheral” version (right) has a D-Sub connector (A) on the front, below the control panel.

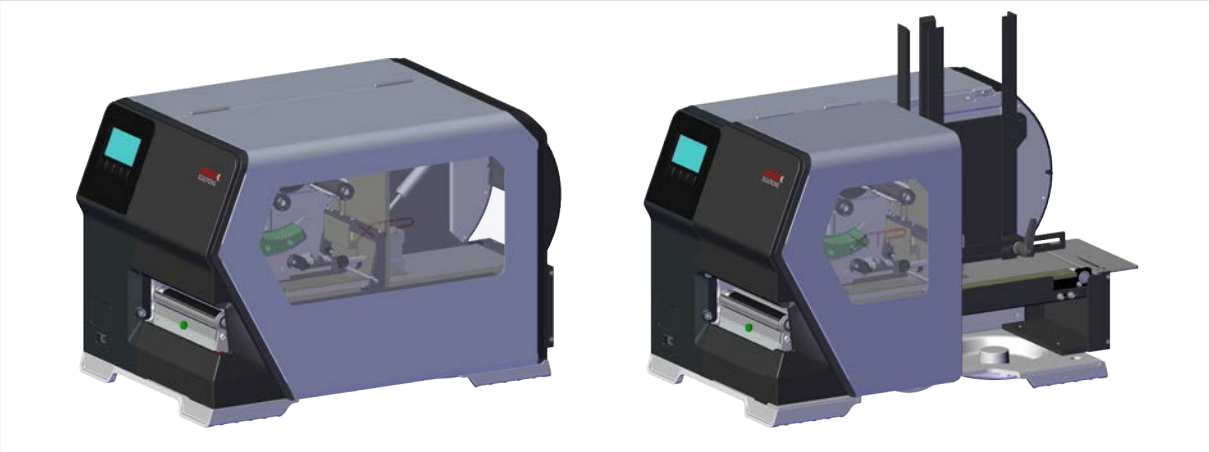


Fig. 10: Left: XTP 604 “Basic” with basic loader; Right: XTP 604 “Basic” with extended loader.

Options and accessories

Internal Options

…should be factory-fitted or installed by a service technician:

- *BasicIO*: Signal interface (24 V, PNP, 3x M12)
- *Basic-USI*: Signal interface (24/5 V, NPN, D-Sub 15)
- *8IO*: Signal interface (24 V, PNP, 2x M12)
- *Ribbon saving function*: No ribbon is consumed over unprinted areas of the label layout
- *Peripheral preparation*: Additional D-Sub connector at the front for external devices

External Options

…do not require any special alterations to the printer, provided that the printer fulfils the prerequisites:

External stacker

Accessories

...require no conversion work or are simply plugged into one of the printer's connections.

- *Foot switch* for foot-operated single label printing. The foot switch is available with M12 or D-Sub connector (prerequisite: BasicIO board or Basic-USI board installed)
- *Wi-Fi USB dongle* for using the web panel via a Wi-Fi connection

FUNCTIONALITY

XTP 60x with basic loader

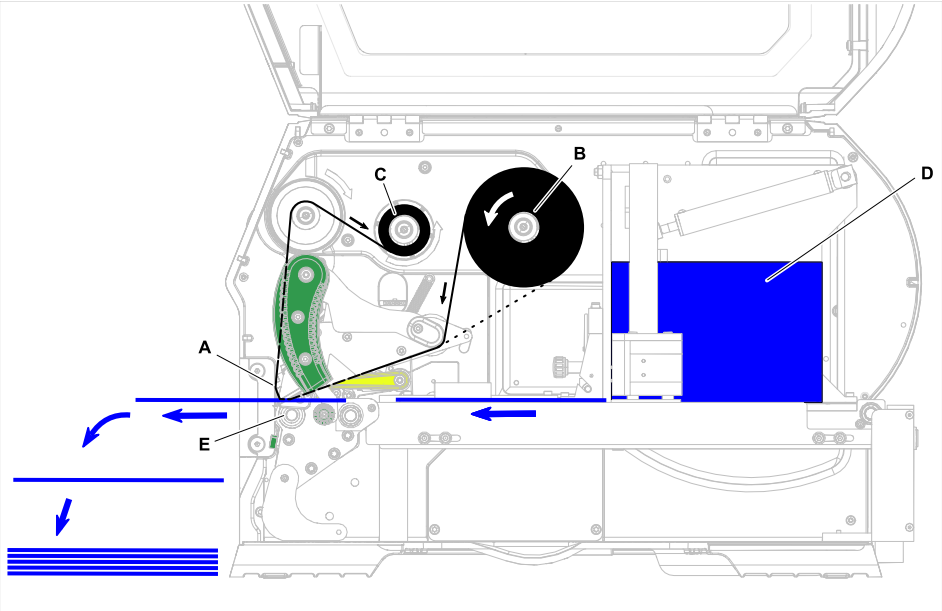


Fig. 11: Material and ribbon path inside the XTP 60x. **A**: print head, **B**: ribbon unwind mandrel, **C**: ribbon rewind mandrel, **D**: label stack, **E**: print roller

The printing principle is based on the thermal print head (A). The core piece of the print head, the thermal edge, consists of a row of dot elements, which can be controlled and heated separately. Each heated dot element leaves a black dot on the label material.

With *thermal direct printing*, the black dot results from the reaction of the thermosensitive label material. With *thermal transfer printing*, the black colour is transferred from the thermal transfer ribbon to the label material.

In order to add the dot lines to an image, the label material has to be passed underneath the print head during printing. This material feeding is accomplished by the print roller (E), which is motor driven. By moving the label material, it is unwound from the label roll (C).

When using thermal transfer printing, the thermal transfer ribbon (“ribbon”) is fed together with the label material underneath the print head. The ribbon position is between label material and print head, the colour side facing the label material. The full ribbon roll is plugged on the ribbon unwinder (B). After passing the print head, the used ribbon is wound onto the ribbon rewinder (C), which is motor driven. If the ribbon roll is completely rewound, a new roll has to be inserted.

Material end and ribbon end are detected by sensors and are displayed on the operation panel (optionally by a sound signal).

The label beginning is detected by a light transmission sensor.

The printed label material can be further processed as follows:

- The tags fall into a collection container
- The tags are stacked by an optional stacker

Function of automatic ribbon economy

In regular print mode without ribbon saving, ribbon is fed simultaneously with the labelling material. As a result, ribbon is also consumed over unprinted areas of the label. Ribbon saving stops the feeding of the ribbon if there are label areas of a certain size without imprinting. As a result, ribbon is saved (picture below).

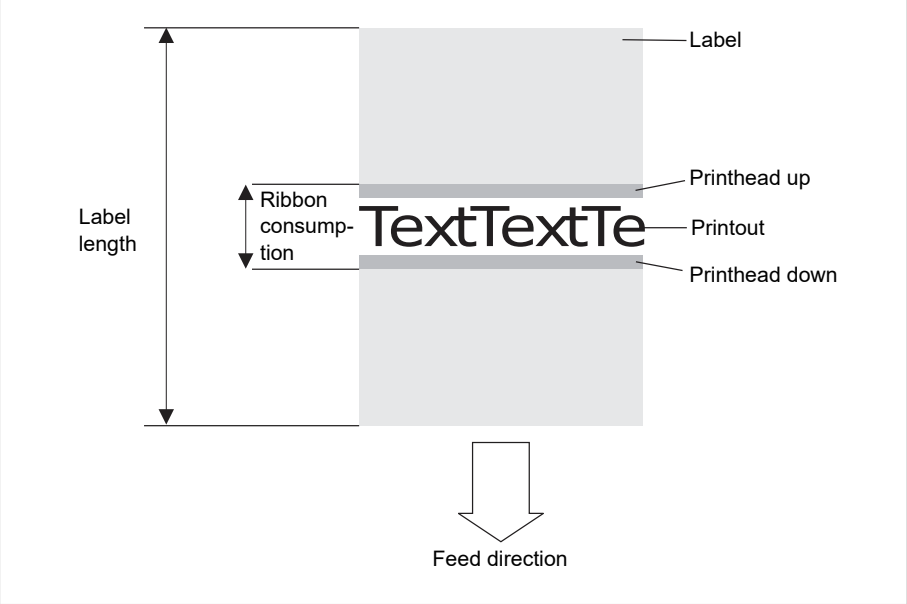


Fig. 12: Ribbon consumption when printing labels with a small imprinting area and activated automatic ribbon economy. Ribbon consumption is slightly higher than the length of the imprinted area.

The effect of ribbon saving depends on the print speed. The reason for this is the up and down movement of the print head as well as the acceleration and slowing-down of the ribbon. Generally said: With a high print speed, less ribbon is saved as with a low print speed (see table below).

Cutting or dispensing applications can additionally deteriorate the effect of ribbon savi-ng.

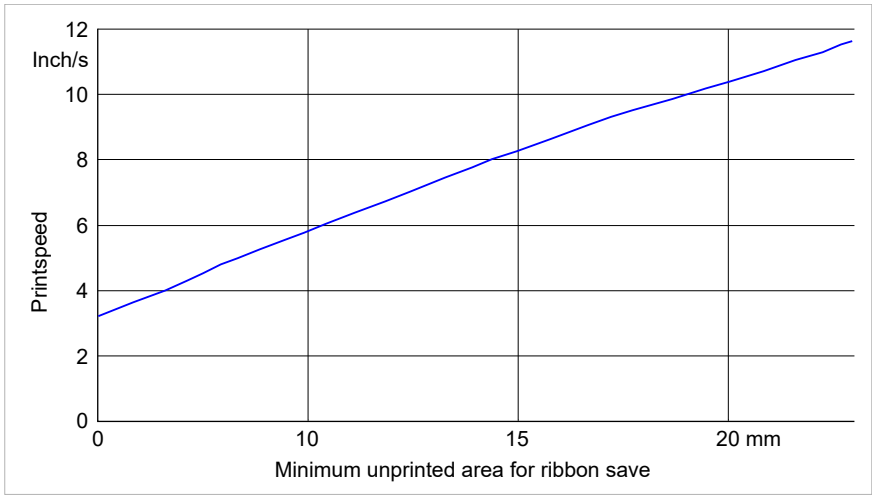
Activate the automatic ribbon saving:

► Print > Material > Ribbon > Ribbon autoecon. = “On”.

Setting the *minimum distance* between two print areas from which on ribbon saving should be activated:

► Refer to parameter Print > Material > Ribbon > Ribb. eco. limit

‖ Mind the minimum length of unprinted area, see graph: ‖



OPERATING CONTROLS

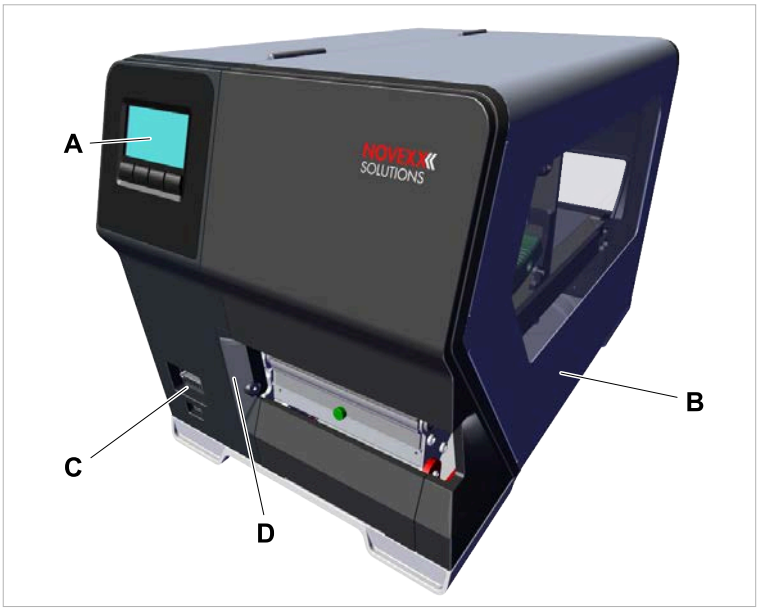


Fig. 13: Operating controls outside at the XTP 604 “Peripheral” with basic loader.

A	*Operation panel* Displays the operating status of the machine; for defining settings in the parameter menu
B	*Front cover* Open this to insert label material and ribbon
C	(At version “Peripheral” only) *Connector* for additional devices (“Options”)
D	*Mounting flange* for options

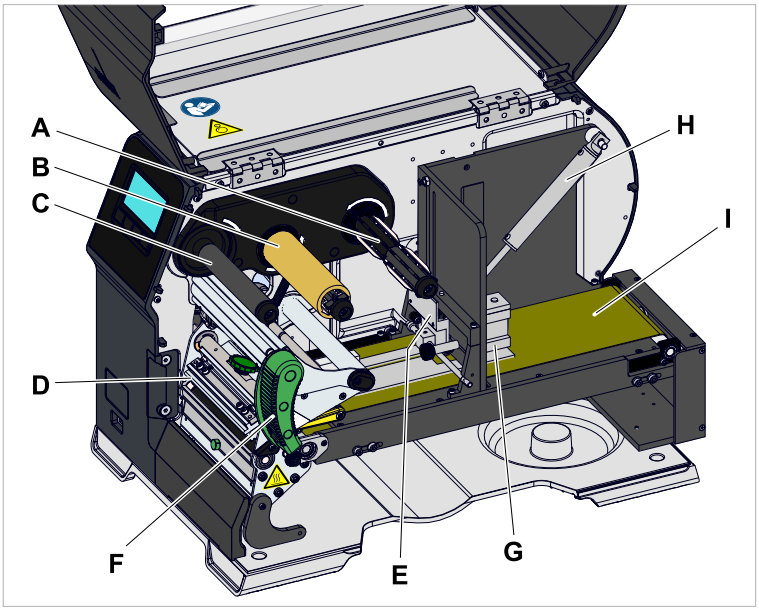


Fig. 14: Operating components at the XTP 604 “Basic” with basic loader.

A	*Ribbon unwinding mandrel*: Holds the ribbon roll
B	*Ribbon winding mandrel*: Winds up the used ribbon
C	(With ribbon saving option) *Ribbon drive roller*: Drives the ribbon (Without ribbon saving option) *Ribbon deflection roller*
D	*Print head*
E	*Tag separator*: The height is adjusted so that only one tag fits underneath at a time
F	*Print head pressure lever*: Opening the pressure lever lifts the printhead. You do this to insert material/ribbon or to clean the printhead/print roller
G	*Stacking guide*: The stacking guide must be adjusted to the material width
H	*Pressure spring*: presses on the label stack from above
I	*Conveyor belt*: Transports the labels from the stack to the print head

Importance of the colours of machine parts:

Green	Operating component, which may be touched by the machine operator
Yellow	Parts that touch the label web
Black	Parts that touch the ribbon web

OPERATING PANEL

Operating Controls

The operation panel of the XTP 604 consists of a graphic display and four keys below the display. The current functions of the keys are displayed by icons (B) above the keys.

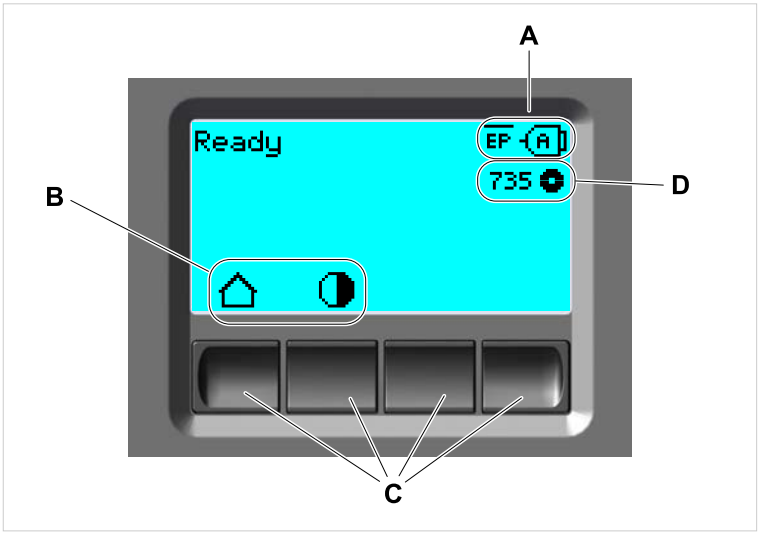


Fig. 15: Operation panel of the XTP 604: **A** Icons that inform about the interface assignment, **B** Icons that show the key assignment, **C** Keys, **D** Remaining ribbon stock.

Operating Principle

The figure shows, how to toggle between the screens:

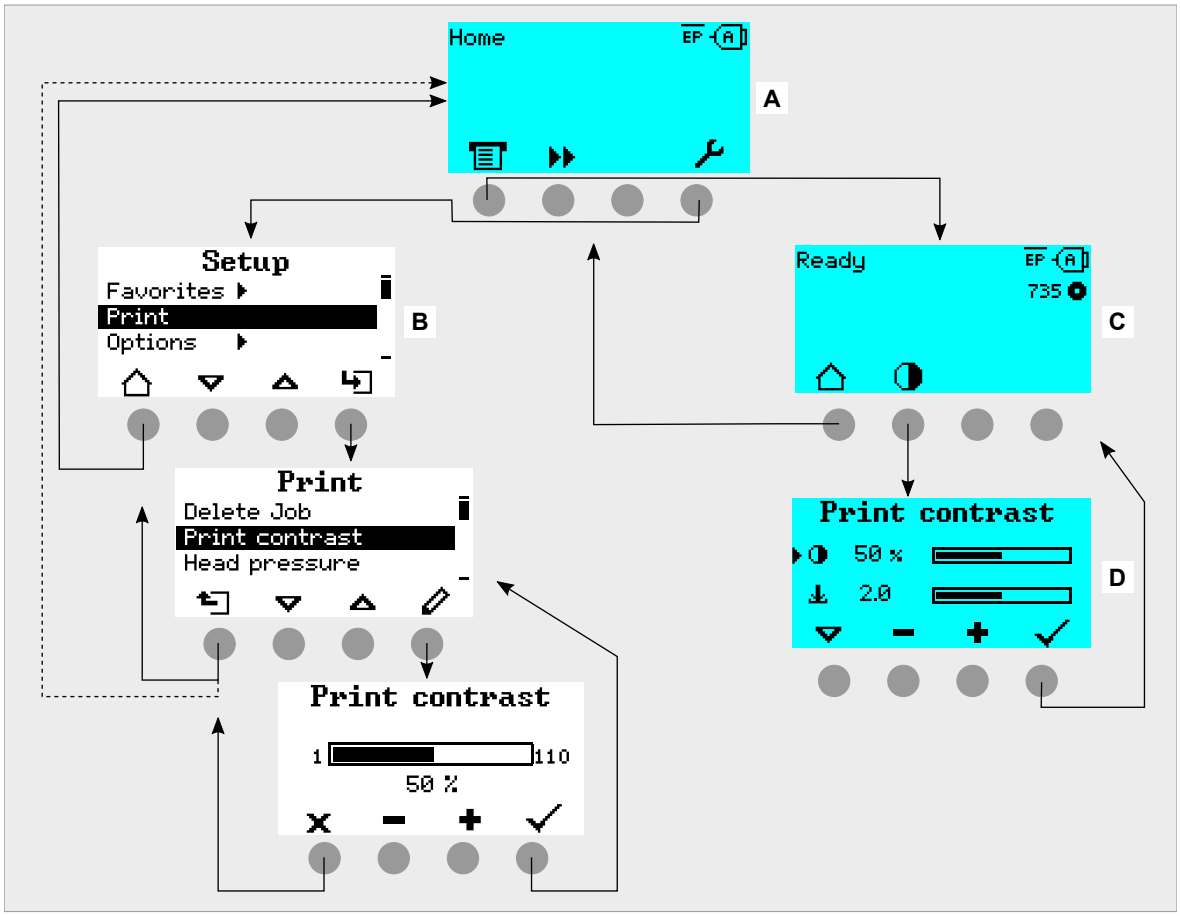


Fig. 16: How to toggle between the screens: **A** “Home” (cyan), **B** “Setup” (white), **C** “Ready” (cyan).

The displayed texts and icons are largely selfexplanatory. Based on the different background colors of the display, the state of the printer can be identified quickly:

Color	State	
Green	Printing	Normal operation, labels are being printed and applied
	Waiting for a start signal	• A print job has been transferred and interpreted *or* • The current print job was stopped In both cases, the machine is waiting for a start signal
Cyan	Home	Generally counts: Cyan => Need for action by the operator • The printer is *not* ready to receive print data • The interpreter has stopped • Error messages or warnings can *not* be displayed
	Stopped	• The current print job was stopped • The printer is ready to receive print data • The commands in the received print job are processed by the interpreter • Errors or warnings can be displayed

Color	State	
	Ready	• The printer is ready to receive print data • The commands in the received print job are processed by the interpreter • Errors or warnings can be displayed
White	Standalone	• Selection of a file on a storage medium • The printer works in the background, without updating the display • Selecting an input field and text input into the input field • Start printing; Errors caused by the print job are displayed
	Setup	• Settings in the parameter menu can be done • The printer is *not* ready to receive print data • The interpreter has stopped • Error messages or warnings can *not* be displayed
Red	Error	• An error occured during the printing • The current print job is stopped • A status message is displayed with red background • The status message only dissappears after pressing the acknowledgement key • The printer remains ready to receive print data if it was able to do so before the error occurred (exception: errors that prevent data communication) • The commands in the received print job are processed by the interpreter • Further errors can occur and, if so, are queued
Yellow	Warning	Same as “Error”, with the following differences: • The current print job is *not* stopped • The warning is displayed with yellow background • The warning dissappears after some seconds

Table 4: Display colors and corresponding states

Icons

	Home: Toggle to the “Home” screen		*Start*: To start an operation, e. g. printing
	Contrast: Setting the print contrast during printing; Hidden, if only operator access rights exist		*Halt*: To stop an operation, e. g. printing
	Printing: Toggle to the „Ready“ screen	1	*Keys 1-4*: For typing in of key codes, the keys are numbered from left to right
	Out: Jump to the next higher menu level; Hold the button pressed: jump to the highest menu level	2	
	In: Opening a menu	3	
	Applicator: Triggers one stroke of the applicator, if present	4	
	Acknowledgement: Acknowledgement, e. g. of an input or an error message		*Cancel*: Leaving the dialog without applying the setting
	Left/Right: Move the marker in the text input dialog to the left or right		*Up/Down*: Move the selection bar upwards or downwards
	Reprint: Triggers the reprint of the preceding label, if the function is activated		*Up to first*: Moves the bar in the selection list to the first position
	Delete: Deletes the character left of the marker in the text input dialog		*Parameter:* Call parameter
	Character selection: Selecting a character in the text input dialog		*Feed:* Trigger material feeding
	Start signal: Input of a start signal by hand in single start mode		*Info*: Call a purely informative menu item
	Setting: Toggle to the „Setting“ screen		*Plus/Minus*: Increase/decrease a value in an input field
	Right: Move one input field further to the right (when typing in values that consist of several fields, e. g. time)		
			Setting of the *print head pressure*
	Jump to the *Dispense Settings* screen; Hidden, if only operator access rights exist		*Dispense position*: Quick access to parameter Dispenser > Dispenseposition
	Start Offset: Quick access to parameter Dispenser > Start Signal > Start offset		*Bar code*: appears for frequently occurring error messages; Press the key to call up the QR code that refers to the quick troubleshooting guide
	Rewinder start: To start the internal or external rewinder		*Rewinder halt*: To stop the internal or external rewinder

Table 5: Those icons inform about the function of the key below the icon

	*Ethernet active*: The network interface is selected for data transfer and a connection could be established [2]		*Ethernet inactive*: The network interface is selected for data transfer and a connection could *not* be established
	*USB*: The USB interface is selected for data transfer [2]		*Auto interface*: The data interface is selected automatically [2]
	*Serial*: The serial interface is selected for data transfer [2]		*Caution*: Warning sign which marks error messages
	*Filter*: The filter function for file names is active (standalone mode)		*Ribbon stock*: Shows together with the number left of it the remaining ribbon length in meters.
	*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “Easyplug” [3]		*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “EasyPlug/ZPL Emu” [3]
	*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “ZPL Emulation” [3]		*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “Lineprinter” [3]
	*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “Hexdump” [3]		*USB thumb drive*: A USB thumb drive is connected and assigned to drive C:
	*XApp*: A XApp is active		

Table 6: Those icons inform about printer states

Key Combinations

Printer state	Key combination	Function
“Home” screen	1+3+4	Enter access code
	3+4	Measuring the label pitch automatically, see chapter Label length on page 75
	2+3	Slow material feed
	1+2	Eject material (backwards)
Always	1+2+3	Reset
	2+4	Standalone mode, see chapter “Standalone Operation” on page 86

Table 7: Special key combinations.

2 Icon flashes during print data transfer

3 Icon flashes during print interpreter activity.

WEB PANEL

Web panel - what´s that?

Video “Web Interface”.

The web panel is a comfortable external control panel, which can be operated on mobile or stationary computing devices. The web panel is supported by the following machines:

- Print & Apply Systems XPA 93x, XDM 94x, XPM 94x
- Label printers XLP 60x, XLP 51x, XTP 60x

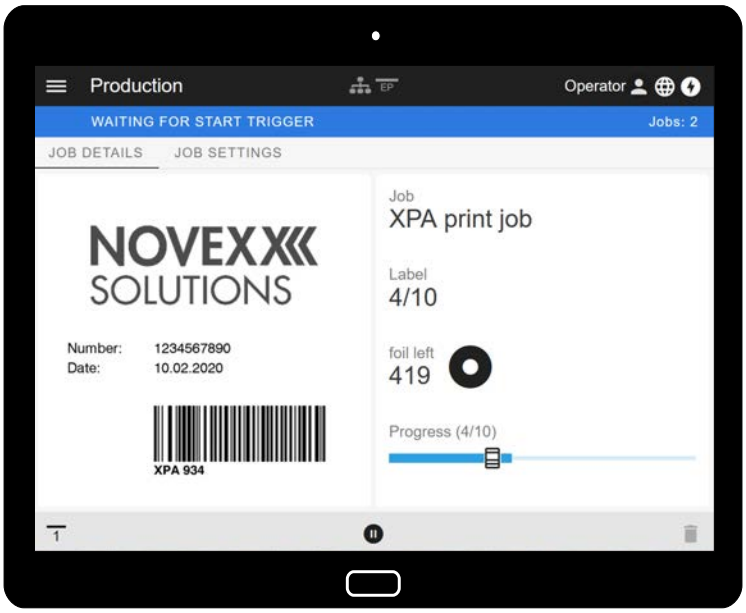


Fig. 17: Display of a print job in process with the web panel on a tablet computer.

Prerequisites

- Display device, e.g. smartphone, tablet computer, PC
- Web browser on the display device
- Connection to the same network to which the machine is connected
- Web server of the machine is activated: Interface > Network > Services > WEB server = “On”

Functions

- *Production monitoring*: Display of running print jobs (see figure above)
- *Machine settings*: Settings in the parameter menu
- *Administration*: Save machine settings; save support data; update firmware; etc.

> *Login*: In order to use the functions of the web panel, the user must log in - with one of the roles Operator, Supervisor or Service. Depending on the role selected, more or less functions are accessible.
>
> The same machine can be accessed from multiple web panels, and the web panels can have different language settings.

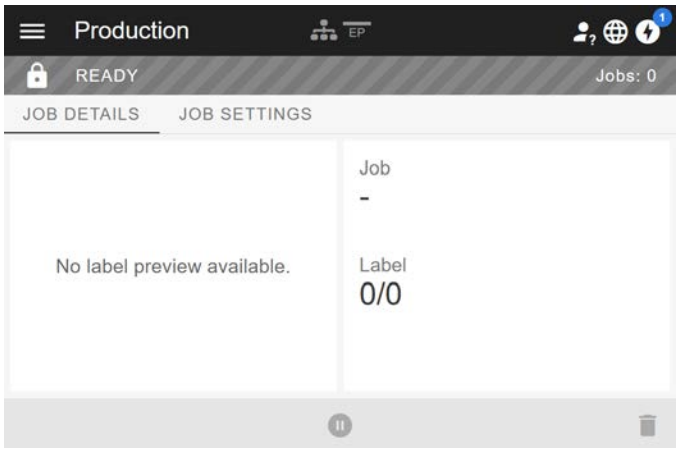
Starting the web panel

Procedure

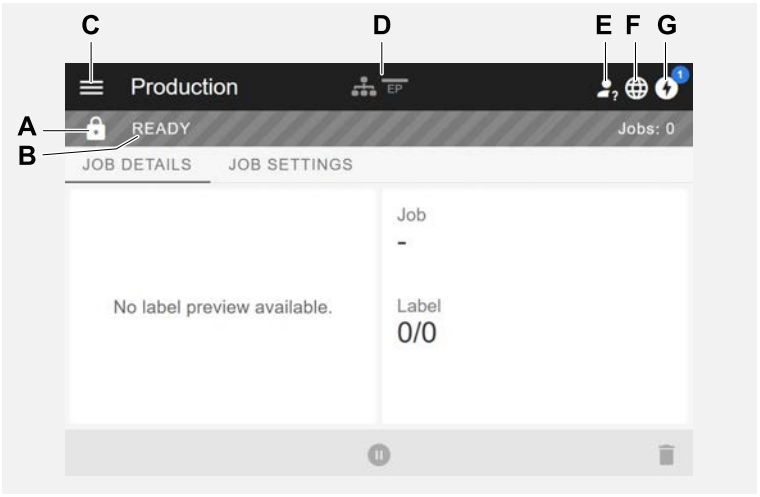
1. Determine the IP address of the machine.

   > The IP address is displayed on the operation panel during machine startup. Alternatively, select the following parameter from the menu: Interface > Network > IP address.

2. Switch on the display device and open the web browser.
3. Enter the IP address in the URL input line of the web browser.
   The following display appears:



Display after the start



Pos. no.	Function
A	*Lock symbol*: No one has logged in yet (pos. E), so most functions are locked. Only the print job details display (middle area of the window with light background) and the message display (pos. G) are accessible.

Pos. no.	Function
B	*Infotext*: Display of different operating states of the machine with different background colours • READY: Appears when the control panel on the machine displays “Ready”. • USER AT MACHINE: Appears when the control panel on the machine displays "Home". At the same time the lock symbol (pos. A) appears and the web panel is locked. This prevents the machine from being started from the web panel while someone is working on the machine (safety function). • ERROR: An unconfirmed error message is present. • WAITING FOR START TRIGGER: The machine is waiting for a start signal . • PRINTING…: The machine is printing
C	*Menu*: Choose here between the views “Production”, “Machine settings” and “Administration”. More details are given in the following chapters.
D	*Icons* that inform about the status of the machine, for more details see link to chapter "Icons" below. The figure above shows, for example, the icons for network connection and Easy Plug emulation.
E	*Login*: In order to use the functions of the web panel, the user must log in - with one of the roles Operator, Supervisor or Service. Depending on the role selected, more or less functions are accessible. ‖ Preset key code for the role Operator: 1-1-3-2 ‖
F	*Language selection*: The language set on the machine is preset. By clicking on the icon, another language can be selected for the web panel.
G	*Notifications*: Display notifications, such as error messages and warnings. See the following chapters for more details.

Related reference

Icons on page 29

“Notifications” view

On the web panel 3 types of notifications are displayed: Error messages, warnings and information.

Error messages

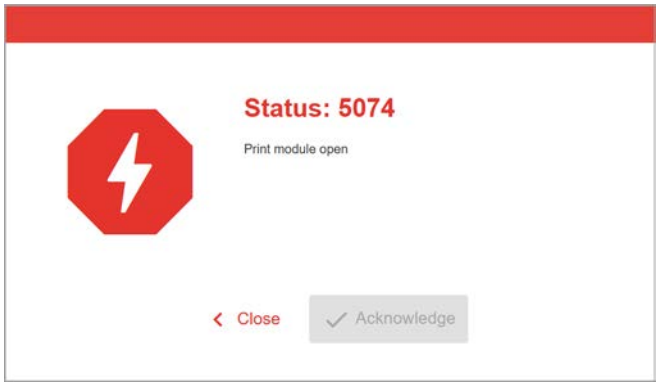


Fig. 18: Error messages that require a reaction from the operator are displayed in full. Status number and status text match the display on the machine operating panel. The message can be confirmed either on the web panel or the machine operating panel.

The Notification View

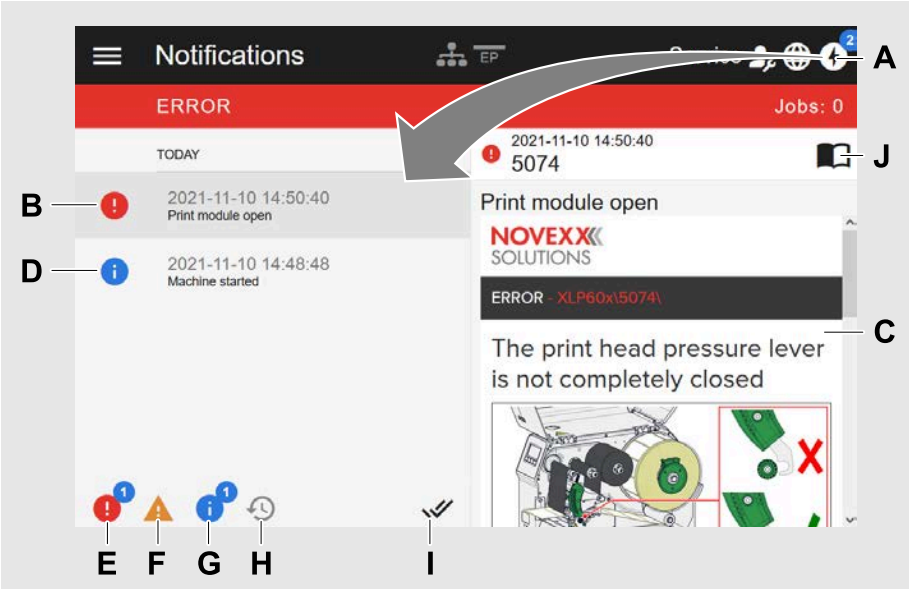


Fig. 19: After clicking on the notification icon (A), the notification view opens. The left half shows the notification history, the right half shows an explanation of the selected entry in the history.

Pos. no.	Function
A	*Notification icon*: Click on the icon to open the notification view. The superscript number indicates the number of unconfirmed notifications.

Pos. no.	Function
B	*Error message* in the history with timestamp. An explanation of the selected entry appears on the right. If there is a quick guide to correct the error message, it is displayed (C).
C	*Quick guide* to the error message, if available (Corresponds to the quick guide that can be accessed via a QR code from the machine operating panel)..
D	*Info message* in the history with time stamp.
E	*Filter for error messages*: Click on the icon to hide error messages from the list
F	*Filter for warnings*: Click on the icon to hide warnings from the list
G	*Filter for info messages*: Click on the icon to hide info messages from the list
H	*History*: Click on the icon to display the notification history. The history shows all notifications that have already been confirmed.
I	*Confirm everything*: Click on the icon to confirm all unconfirmed notifications. Confirmed notifications only appear in the history.
J	Manual symbol: Click on the icon to access the detailed user manual of the machine.

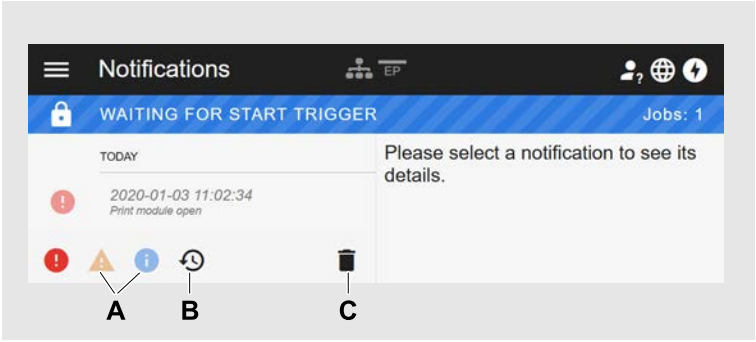


Fig. 20: Notification view with history.

Pos. no.	Function
A	The filters for warnings and info messages are set. The icons are displayed pale and all warnings and info messages are hidden.
B	History is displayed (symbol is black, otherwise grey).
C	Trashcan icon: Only appears when history is displayed. Clicking on the icon deletes the history.

Exiting the notification view:

► Click on “Notifications” in the header.

The web panel switches to the production view.

“Production” view

In the production view, the print job in progress can be monitored and settings can be made for the print job.

“Job details” view

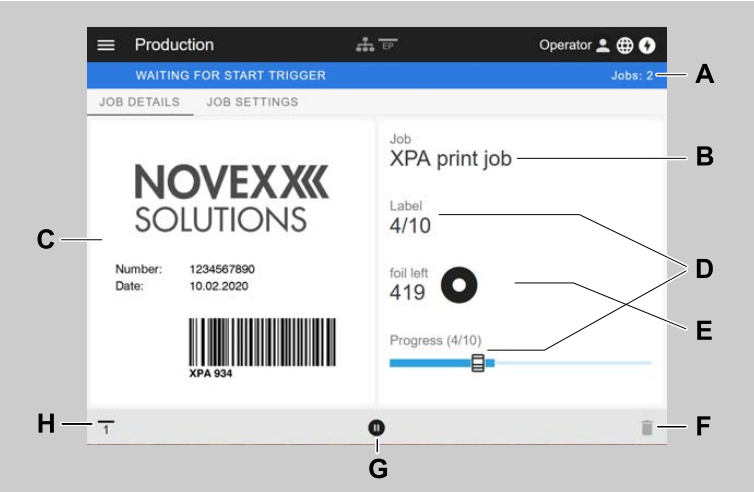


Fig. 21: “Job details” view of a print job in the web panel.

Pos. no.	Function
A	Number of compiled print jobs
B	Name of the current print job (defined in the Easy Plug command #ER)
C	Label layout of the current print job
D	Progress display of the current print job (4 of 10 labels were printed)
E	Display of the remaining ribbon in meters
F	*Trashcan icon*: Click to delete the print job (requires at least supervisor role, in the figure the icon is grayed out, i.e. the function is not available with the current role)
G	*Stop or Start icon*: Click to stop or start the print job
H	*Start signal icon*: Click to print and dispense a label

“Job Settings” view

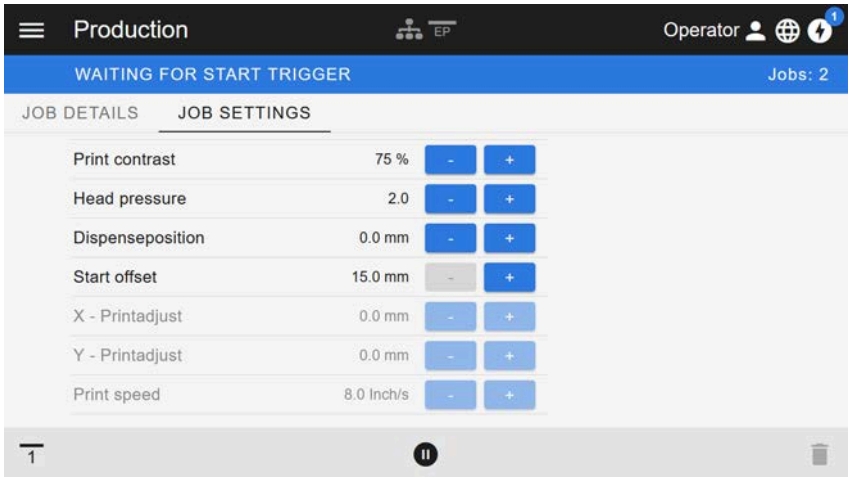


Fig. 22: View “Job Settings” of a print job in the web panel. Settings not accessible with the active role (here: “Operator”) are greyed out. The other settings can be changed by clicking on “+” or “-”.

“Machine settings” view

Main menu

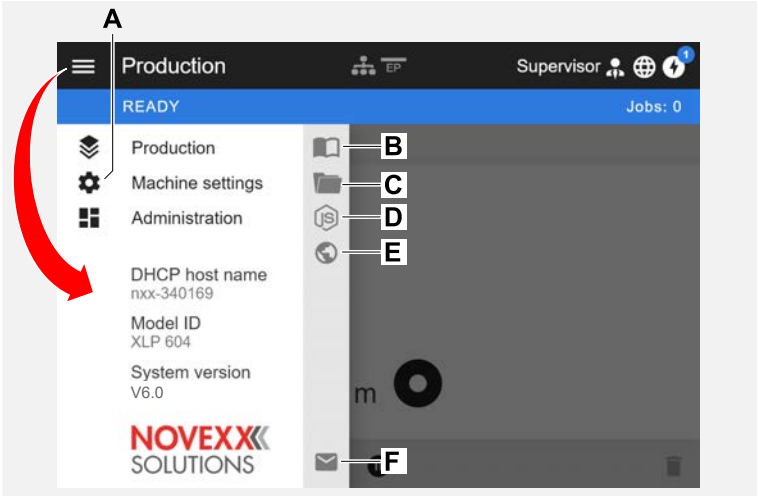


Fig. 23: View after clicking on the menu icon in the upper left corner.

Pos. no.	Function
A	Open machine settings (see following chapter)
B	Opens the user manual
C	EXPERTS Opens the file manager
D	EXPERTS Opens the documentation of the nxmi API interface

Pos. no.	Function
E	Opens the NOVEXX Solutions web page
F	Opens an e-mail to the NOVEXX Solutions service hotline

Machine settings

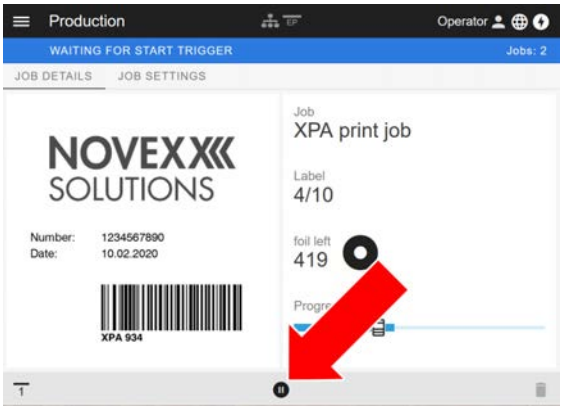
After clicking on “Machine settings”, the parameter menu familiar from the machine operating panel opens.

More or less parameters are displayed depending on the permissions given by the login role. As “Operator” only the parameters of the Info menu can be accessed.

In order to make machine settings, two conditions must be met:

- Login at least as Supervisor (key sequence 2-2-3-1-2-2)
- The machine must be *stopped*, otherwise the window will appear “greyed out”

► To *stop*, click the button at the bottom centre of the window:



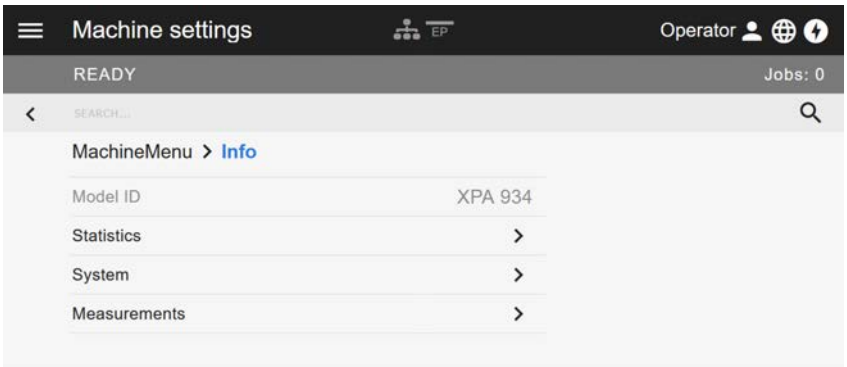


Fig. 24: Machine settings view with the operator role.

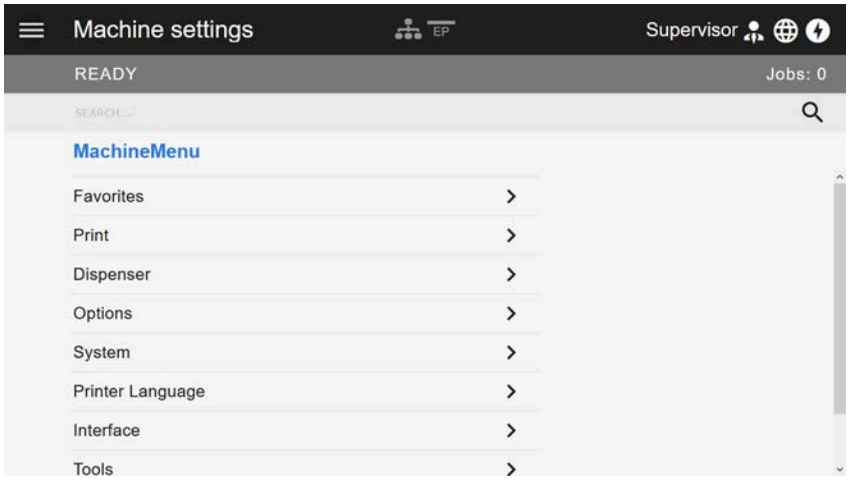


Fig. 25: Machine settings view with the supervisor role.

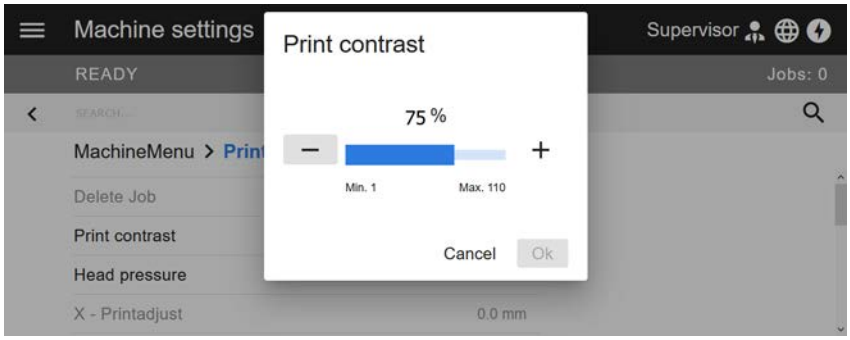


Fig. 26: Example: setting of Print > Print contrast.

Search function:

If you do not know in which menu the parameter you are looking for can be found, but know at least part of the name, the search function will help you find it quickly:

► Enter the search term in the search field (A) - only parameters containing the search term will appear (B).

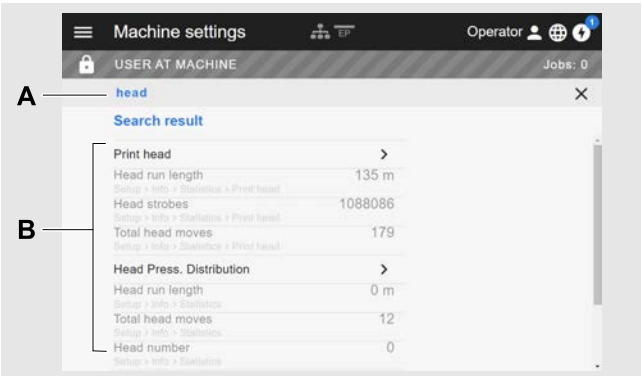


Fig. 27: After entering the search term “head” (A), only parameters containing “head” in the name are displayed (B).

“Administration” view

EXPERTS

With the login roles “Supervisor” and “Service”, the “Verwaltung” view appears in the menu additionally. This view provides special functions for qualified and authorized personnel. For more information, refer to the service manual.

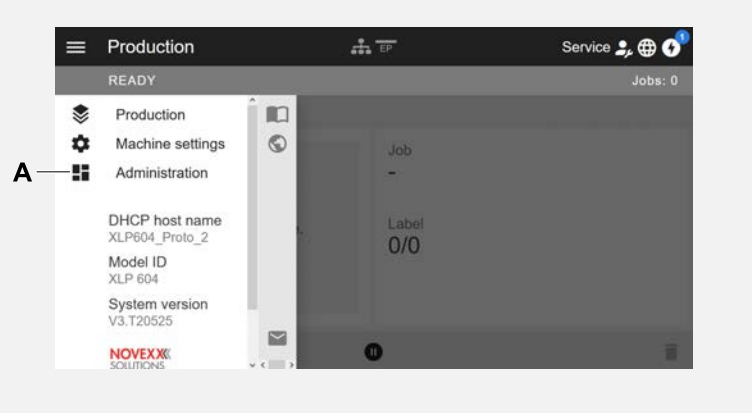


Fig. 28: After logging in as supervisor or service, the “Verwaltung” entry (A) appears in the menu.

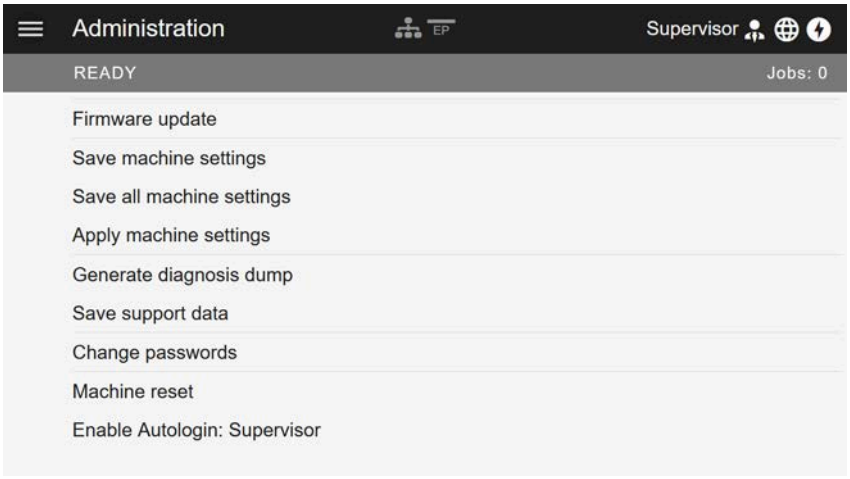


Fig. 29: Administration view (only with “Supervisor” or “Service” rights).

PARAMETER MENU

Overview parameter menu

The table below gives an overview of the structure of the parameter menu and the parameters it contains.

> Only the parameters printed in *red* are described here. The parameters printed in *black* are only relevant for service personnel and are therefore described in the Service Manual.

► Click on the respective link (red text) in the table to get to the parameter description.

Favorites [4]	Print	Print (continued)
Parameter 1	Delete Job	└ Ribbon
Parameter 2	Print contrast	├ Ribbon width
...	Head pressure	├ Ribbon Rew Tens.
Parameter n	X - Printadjust	├ Ribbon Unw Tens.
	Y - Printadjust	├ Color Side
	Print speed	├ Ribbon length
	Delete Spooler	├ Outer ribbon Ø
	Material	├ Inner ribbon Ø
	├ Label	├ Ribbon autoecon. [5]
	├ Detect label length	├ Head down lead [6]
	├ Print method	├ Ribb. eco. limit [6]
	├ Head down lead [7]	└ Feed mode
	├ Head up limit [7]	Format
	├ Material type	├ Bar code multip.
	├ Punch offset	├ UPC plain-copy
	├ Material length	├ EAN Readline
	├ Material width	├ EAN sep. lines
	├ Label sens. type	├ Rotated barcodes
	├ Punch mode	└ Print direction
	├ Punch level [8]	Feed speed
	├ Mat. end detect.	(Backfeed speed)
	└ Rewinder Tension	Voltage offset

Table 8: Parameter menu part 1 (parameters in brackets are only visible with “service mode” access rights)

4 Parameter selection definded by the operator, see chapter Definition of Favorites on page 52
5 Only with installed ribbon saving option
6 Only with Print > Material > Ribbon > Ribbon autoecon. = “On”
7 Only with Print > Material > Label > Print method = “Thermal/headlift”
8 Only with Print > Material > Label > Punch mode = “Manual”

Options	System	Printer Language
Selection	Language	Print Interpret.
├ Periph. device	Speed unit	EasyPlug Setting
‖ At this point appear the submenus with parameters for further options if such are built into the machine. For details refer to the service manual. ‖	Access authoriz.	├ Character filter
	(Operator password)	├ Character sets
	(Supervisor password)	├ EasyPlug errors
	(Service password)	├ EasyPlug warning
	Factory settings	├ Spooler mode
	Custom defaults	├ StandAlone Input
	Setup Wizards	├ #VW/I Interface
	(Run Setup Wizard?)	├ Printer ID no.
	Turn-on mode	├ (Command sequence)
Rewinder [9]	Hardware Setup	└ (Ignore #IM cmd.)
├ Rewind direction	├ (Printer type)	ZPL Setting [10]
├ Rewinder Values	├ Time zone	├ Manual Calibrate
└ Rewinder adjust	├ Realtime Clock	├ Darkness
Tear-off edge [11]	└ Head-sensor dist	├ Label Top
└ Dispenseposition	Print Control	├ Left Position
Label Sensor	├ Miss. label tol.	├ Error Indication
├ Sensor type	├ Fast startup	├ Error Checking
├ Clear label sensor	├ Init with Head Up	├ Resolution
└ Sensor teaching	├ Gap detect. mode	├ 305 DPI Scaling
Keyboard	├ Max InitFeedback	├ Image Save Path
	├ Ribb. stretching	├ Label Invert
	├ Singlestartquant	└ Commands
	├ Reprint function	├ Format Prefix
	├ Ribbon end warn.	├ Control Prefix
	├ Ribbon warn stop	├ Delimiter Char
	├ Error reprint	├ Command ^PR
	├ Single-job mode	├ Command ^MT
	├ Temp. reduction	├ Command ^JM
	└ Print info mode	└ Command ^MD/~SD

Table 9: Parameter menu part 2 (parameters in brackets are only visible with “service mode” access rights)

9 Only with Options > Selection > Periph. device = “Rewinder”

10 Only with Printer Language > Print Interpret. = “ZPL Emulation”

11 Only with Options > Selection > Periph. device = “Tear-off edge”

Printer Language (continued)	Interface	Interface (continued)
PDF Setting [12]	Print interface	├ Drive D
├ PDF print quantity	Network	└ Drive E
├ Scale to Label	├ IP Addressassign	└ Drive F
├ Manual scaling [13]	├ IP address	Home mode
├ Blck./white threshold PDF obj.	├ Net mask	
├ Blck./white threshold graphic	├ Gateway address	
├ Rotate 90°	├ Port address	
├ Print direction	├ DHCP host name	
├ EasyPlug imm. support	└ Services	
├ EasyPlug imm. interface [14]	├ WEB server	
└ EasyPlug imm. port [14] [15]	├ FTP server	
	├ Wi-Fi	
	├ (MQTT Broker)	
	├ (MQTT Broker IP) [16]	
	├ Time client	
	├ Time server IP [17]	
	├ Time zone [18]	
	└ Sync. interval [18]	
	Serial Port 1	
	├ Baud rate	
	├ No. of data bits	
	├ Parity	
	├ Stop bits	
	├ Data synch.	
	└ Frame error	
	Drives	
	├ Drive C	

Table 10: Parameter menu part 3 (parameters in brackets are only visible with “service mode” access rights)

12 Only with Printer Language > Print Interpret. = “PDF Direct”
13 Only with Printer Language > PDF Setting > Scale to Label = “No”
14 Only with Printer Language > PDF Setting > EasyPlug imm. support = “Yes”
15 Only with Printer Language > PDF Setting > EasyPlug imm. interface = “TCP/IP SOCKET”
16 Only with Interface > Network > Services > MQTT broker = “External server”
17 Only with Interface > Network > Services > Time client = “Time server IP”
18 Only with Interface > Network > Services > Time client = “Automatic” or “Time server IP”

Tools	Tools (continued)
Diagnostic	(Adjustment)
├ (User modified) [19]	├ (Sensor Adjust)
├ Parameter 1	├ (Matend tolerance)
├ ...	├ (Feedadjust label)
└ Parameter n	├ (Feed adjust)
├ Store Parameters	├ (Forw feed rat.)
├ Gen.Support Data	├ (Backw feed rat.) [20]
├ EasyPl. file log [21]	├ (Ribbon feed adj.)
├ Log files delete [21]	├ (Punch y calibr.)
├ EasyPlug Monitor	└ (Head idle adjust)
└ EP Monitor Mode	Internal Flash
Test	├ Copy From USB [22]
├ Sensor test	└ Delete Dir
└ Print test	
(Service)	
├ (Service done)	
├ (Head exchange)	
├ (Roller exchange)	
├ (Cutter change) [23]	
└ (Serv. data reset)	

Table 11: Parameter menu part 4 (parameters in brackets are only visible with “service mode” access rights)

19 Parameters, whose settings differ from the factory setting.

20 Only with Options > Selection > Periph. device = “Internal Rewinder”

21 Only with Interface > Drives > Drive C ≠ “None”

22 If at least one external flash memory is plugged into one of the USB interfaces.

23 Only with Options > Selection > Periph. device = “Cutter”

Info	Info (continued)	Info (continued)
Model ID	├ Total cuts [30]	├ Space for RAM disc
Status Printouts	├ Tot. mat. length	├ Storage media
├ Printer Status	├ Tot. ribb. length	├ Internal Flash
├ Memory Status	├ Head strobes	├ USB1 [24]
├ Font Status	├ Operation time	├ USB2 [25]
├ Service Status	└ Total Operation	├ USB vorne [26]
├ Dottest endless	System	├ Spooler size
├ Dottest punched	└ Machine Data	├ Space for Jobs
└ Reference label	├ Serial number	├ Max. Labellength
Statistics	├ Product code	└ Custom defaults
└ Print head	├ Manufacturer	└ CPU board
├ Head run length	└ Production date	├ CPU identifier
├ Head strobes	└ Module FW. Vers.	├ FPGA version
├ Total head moves	├ System version	├ Module name
├ Operation time	├ System revision	├ MAC Address
├ Contrast distribution	├ System date	├ Module part numb.
├ Head pressure distribution	├ Operator panel	├ PCB part number
├ Thermal distribution	├ Ribbon unwinder	├ Serial number
└ Print speed distribution	├ Ribbon rewinder	├ Production date
├ Head run length	├ Material rewind	├ Electronics
├ Roll run length	├ TPH power	└ Module type
├ Cuts on knife [30]	├ Tot. ribb. length [27]	└ Operator panel
├ Total head moves	├ BasicIO [28]	└ Serial number
├ Service operations	├ BasicUSI [29]	└ Ribbon unwinder
├ Head number	└ Cutter [30]	├ Module name
├ Roll number	└ Memory Data	├ Module part numb.
├ Cutter number [30]	├ RAM memory size	├ Serial number

Table 12: Parameter menu part 5 (parameters in brackets are only visible with “service mode” access rights)

24 If at least one external flash memory is plugged into one of the USB interfaces.
25 If a second external flash memory is plugged into the second USB interface.
26 If an external flash memory is plugged into the front USB interface.
27 Only with installed ribbon saving option
28 Only with installed BasicIO board
29 Only with installed Basic-USI board
30 Only with Options > Selection > Periph. device = “Cutter”

Info (continued)			Info (continued)			Info (continued)		
	├	Production date		├	Electronics	└	Power supply	
	├	Electronics		├	Module part numb.		├	Module name
	├	CAN MAC address		├	Serial number		├	Module part numb.
	└	Module type		├	Production date		├	Serial number
└	Ribbon rewinder			├	CAN MAC address		├	Production date
	├	Module name		└	Module type		├	Module type
	├	Module part numb.	└	BasicUSI [31]			└	Version
	├	Serial number		├	Module name	└	Print head	
	├	Production date		├	Module part numb.		├	Module name
	├	Electronics		├	Serial number		├	Module part numb.
	├	CAN MAC address		├	Production date		├	Serial number
	└	Module type		├	Electronics		├	Production date
└	Material rewind [32]			├	CAN MAC address		├	Module type
	├	Module name		└	Module type		├	Resolution
	├	Module part numb.	└	Ribbon feed [33]			├	Width
	├	Serial number		├	Module name		└	Resistance
	├	Production date		├	Module part numb.	Measurements		
	├	Electronics		├	Serial number	├	Ribb. rest length	
	├	CAN MAC address		├	Production date	├	Ribbon diameter	
	└	Module type		├	Electronics	├	Ribb. rewinder Ø	
└	TPH power			├	CAN MAC address	├	Mat. rewinder Ø	
	├	Module name		└	Module type	└	Head temperature	
	├	Module part numb.	└	Cutter [34]				
	├	Serial number		├	Module name			
	├	Production date		├	Module part numb.			
	├	Electronics		├	Serial number			
	├	CAN MAC address		├	Production date			
	└	Module type		├	Electronics			
└	BasicIO [35]			├	CAN MAC address			
	├	Module name		└	Module type			

Table 13: Parameter menu part 6 (parameters in brackets are only visible with “service mode” access rights)

31 Only with installed Basic-USI board

32 Only with Options > Selection > Periph. device = “Internal Rewinder”

33 Only with installed ribbon saving option

34 Only with Options > Selection > Periph. device = “Cutter”

35 Only with installed BasicIO board

Parameter Reference

Print contrast

Setting range	Default setting	Step width	Easy Plug
[1...110] %	65%	1	#!H, #PC2045

> CAUTION!
> The parameter Print contrast affects directly the life durance of the print head. It counts: „The higher the setting of Print contrast is, the lower is the life durance of the print head“. This counts even more for settings above 100%. Therefore mind:
>
> ► Always choose the lowest possible setting necessary to produce an acceptable print result.

Head pressure

Setting range	Default setting	Step width	Easy Plug
[0.1...3.0]	1.0	0.1	#PC2045

Setting of the pressure that presses the print head at the print roller (1=low pressure, 3=high pressure).

> The setting corresponds to the adjustment-knob settings “I” to “III” at older machine types.
>
> Setting this parameter to values < 1.0 can help to prevent the curle effect for thin labels that leads to problems when feeding the labels into the cutter.

X - Printadjust

Setting range	Default setting	Step width	Easy Plug
[-15...15] mm	0.0 mm	0.1 mm	#PC1020

The zero point of the mask is moved in relation to the edge of the label on the X axis, i. e. lengthways to the material.

- Maximum offset away from the edge of the label: +15.0 mm
- No offset: 0.0mm
- Maximum offset towards the edge of the label: -15.0 mm

> If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.
>
> Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter X - Printadjust, the part of the graphics which "juts out" will get lost.

Y - Printadjust

Setting range	Default setting	Step width	Easy Plug
[-15...15] mm	0.0 mm	0.1 mm	#PC1021

The zero point of the mask is moved in relation to the edge of the label on the Y axis, i. e. in the feed direction.

- Maximum offset in feed direction: +15.0 mm
- No offset: 0.0mm
- Maximum offset against feed direction: -15.0 mm

> If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.
>
> Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter X - Printadjust, the part of the graphics which "juts out" will get lost.

Print speed

Setting range (Inch/s)	Default setting	Step width	Easy Plug
XTP 604: [3.0..16.0] Inch/s	8.0 Inch/s	0.1 Inch/s	#PC1003, #PR

Setting range (mm/s)	Default setting	Step width	Easy Plug
XTP 604: [76..406] mm/s	203 mm/s	1 mm/s	#PC1051, #PR

> The speed unit can be switched between Inch/s and mm/s (see parameter Speed unit).

The print speed (material feed) can be adjusted according to the ribbon and material combination being used in order to optimise the contrast depth and the density of the print image.

Delete Job

Setting range	Default setting	Step width	Easy Plug
--	--	--	#!CA

After activating the function, the printer cancels the processing of the active print job.

Delete Spooler

Setting range	Default setting	Step width	Easy Plug
--	--	--	#!CA

After activating the function, all print jobs in the printer spooler are deleted..

Print method

Settings	Default setting	Step width	Easy Plug
Thermo transfer, Thermal printing	Thermo transfer	--	#PC2018, #ER

- *Thermo transfer*: Thermo transfer printing (ribbon end sensor is switched on)
- *Thermal printing*: Thermo direct printing (ribbon end sensor is switched off)

Detect label length

‖ Only works if label material is inserted. ‖

Measures the label length and writes the value to parameter Material length. During the measurement, the label material is fed approx. 2 label lengths.

Material type

Settings	Default setting	Step width	Easy Plug
Endless, Punched	Punched	--	#PC1005, #IM

Definition of the used label material. A distinction is made between endless material and gapped material (hole gaps, self-adhesive material with register gaps). The detected gap position corresponds to the start of the label.

- *Endless*: If material is to be used without gaps
- *Punched*: If material is to be used with gaps

‖ The value is overwritten by the appropriate Easy Plug command when sending label formats. ‖

Material length

Settings	Default setting	Step width	Easy Plug
[5...max. label length [36]]	100 mm	0.1 mm	#PC1006, #IM

The material length (label length) is the distance between the gaps, measured from the front edge (beginning) of a label to the front edge of the next label.

‖ The value is overwritten by the appropriate Easy Plug command when sending label formats. ‖

Material width

Settings	Default setting	Step width	Easy Plug
6,0...max. width [37]	100 mm	0.1 mm	#PC1007, #IM

Zero position of the left border. If the printer is working in line-printer mode, alterations can be made in millimetre units.

Label sens. type

(Label sensor type)

Settings	Default setting	Step width	Easy Plug
Punched, Reflex, Clear label sensor, APSF label sensor	Punched	--	#PC2015, #IM

- *Punched*: Light transmission sensor for labels with transparent or register gaps (self-adhesive labels)

36 The max. label length depends on several factors, e. g. the memory configuration.

37 The max. width depends on several factors, e. g. the memory configuration.

- *Reflex*: Reflex sensor for detection of black marks on the bottom side of the label material

> The setting “Reflex” appears only when
> – the optional combined sensor is installed
> – the combined sensor is activated (Options > Sensor type = “Combined sensor”)

- *Clear label sensor*: Sensor for detecting transparent labels (option for XPA 93x and XDM/XPM 94x)
- *APSF label sensor*: Sensor connected externally to the APSF board for detecting transparent labels

Ribbon width

Settings	Default setting	Step width	Easy Plug
[25...110] mm	110 mm	1 mm	#PC1033

Width of the applied thermotransfer ribbon.

Color Side

Settings	Default setting	Step width	Easy Plug
inside, outside	inside	--	#PC1049

- *inside*: The ribbon roll is wound with the color side *inwards*.
- *outside*: The ribbon roll is wound with the color side *outwards*.

Ribbon length

Setting range	Default setting	Step width	Easy Plug
[300.0...600.0] m	600.0 m	0.1 m	#PC1038

Ribbon length of the applied ribbon roll. The ribbon length is marked on the packaging of the new ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

Outer ribbon Ø

(Outer ribbon roll diameter)

Setting range	Default setting	Step width	Easy Plug
[50.0...100.0] mm	81.3 mm	0.1 mm	#PC1039

Outer Ø of the applied ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

Inner ribbon Ø

(Inner ribbon roll diameter)

Setting range	Default setting	Step width	Easy Plug
[28.0...40.0] mm	33.0 mm	0.1 mm	#PC1040

Inner Ø of the applied ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

‖ Inner Ø of the ribbon roll = Outer Ø of the ribbon core! ‖

Ribbon end warn.

Setting range	Default setting	Step width	Easy Plug
[5...300] m	25 m	5 m	#PC2083

Setting of a limit length for the remaining ribbon. If the remaining ribbon length falls below the set value, appears a…

- Warning, if System > Print Control > Ribbon warn stop = “Off”
- Error message, if System > Print Control > Ribbon warn stop = “On”; Furthermore, the printer stops

Also refer to parameter Ribbon diameter.

Ribbon warn stop

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC2060

- *Off*: Display shows ribbon warning; printer does *not* stop
- *On*: Display shows status message (see below); printer stops after the current label

```
Status: 5110
Ribbon low
```

Temp. reduction

(Reduction in the print head temperature)

Setting range	Default setting	Step width	Easy Plug
[0...100]%	20%	5%	#PC2026

Reduces the power supply in the event of an increase in the print head temperature, there-by ensuring an evenly good print image.

The following setting alternatives are available:

- 0%: No temperature reduction.
- xx%: Up to xx% temperature reduction with a hot print head.

For details refer to chapter Temperature Compensation on page 76.

Definition of Favorites

It is possible to create a Favorites menu item containing a selection of parameters as required.

Selecting favorites in the web panel

EXPERTS Favorites are set in the web panel in the machine settings view. To do this, the operator must be logged in to the web panel with the service role.

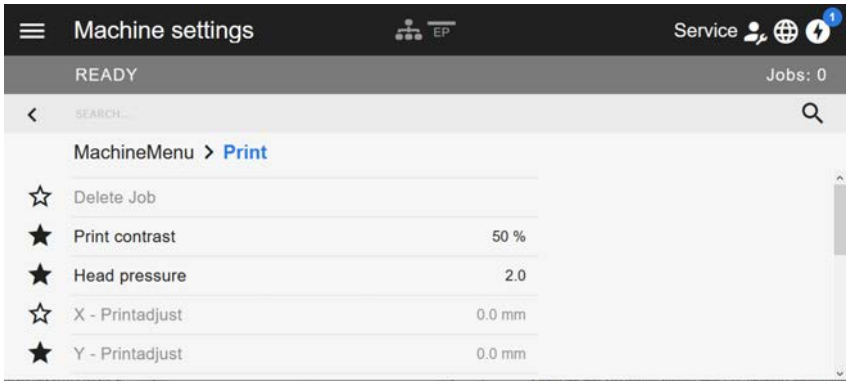


Fig. 30: Machine settings view in the web panel. The stars to the left of the parameters mark the favorites. Filled star = parameter selected for favorites menu.

► Click on the star next to the parameter to select it as favorite (see figure above).

Related reference

“Machine settings” view on page 37

CONNECTIONS

WARNING!

This machine operates using mains voltage! Touching live electrical parts may expose you to hazardous electrical currents and may lead to burns.

► Make sure that the machine is switched off before connecting the power cable.

► Only connect the machine to a grounded power socket fitted to authorised standards.

► Only link the machine to devices that fulfil the ES1 circuit requirements specified in EN 62368-1.

CAUTION!

Risk of machine damage due to defective accessories.

► Only connect original accessories.

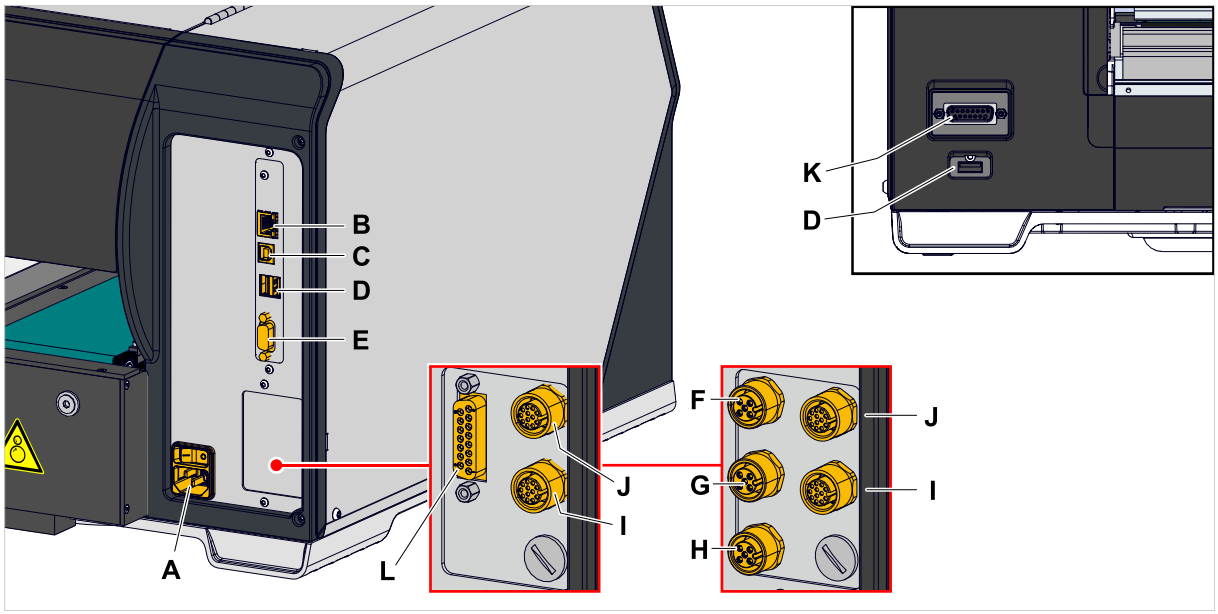


Fig. 31: Connections at a XTP 60x“Peripheral”, optional with “BasicIO” (F-H) and “8IO” (I, J) or with “Basic-USI” (L) and “8IO” (I, J) interface boards.

Pos.	Connection	Application
A	Connection to the mains power supply	Power supply
B	Network connection (Ethernet 10/100/1000)	Used to transfer print jobs from a host (for example a PC); transfer firmware; read service data; operation via web server
C	USB interface type B (device)	Used to transfer print jobs from a host (for example a PC); transfer firmware; read service data
D	USB interface type A (host) (2x rear side, 1x front)	Used to connect devices, for example keyboard or scanner or external memory media
E	Serial interface (RS232)	Used to transfer print jobs from a host (for example a PC); transfer firmware; read service data

Pos.	Connection	Application
F	(Optional) BasicIO board	Connector for a start sensor (standard industrial sensor, e.g. Novexx N102106 or N102109 or foot switch N103110), triggers the printing dispensing cycle. Signal inputs and outputs for controlling the printer or for system integration (4 inputs, 4 outputs)
G		
H		
I	(Optional) 8IO board	Signal inputs and outputs for controlling the printer or for system integration (8 inputs, 8 outputs)
J		
K	(Optional) Periphery interface	Connector for peripheral devices (e. g. Cutter)
L	(Optional) Basic-USI board	Signal inputs and outputs for controlling the printer or for system integration (4 inputs, 7 outputs)

Related tasks

Connecting to the mains power supply on page 55

Related reference

Connecting to a data host on page 56

Before Operation

ELECTRICAL CONNECTIONS

Connecting to the mains power supply

WARNING!

This machine operates at mains voltage! Contacting electrically live components can cause lethal electrical shocks and burns.

► Make sure that the machine is switched off before connecting the power cable.

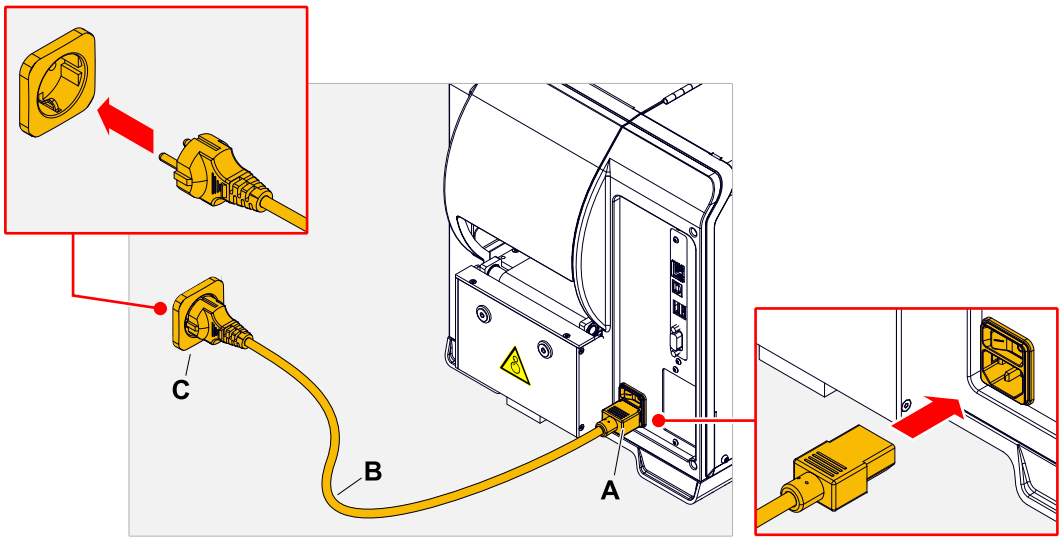
► Only operate the machine at the mains voltage given on the type plate.

► Only connect the machine to a grounded power socket fitted to authorised standards.

Procedure

Connecting the mains connection cable:

1. Ensure that the machine is switched off (mains power switch (A) in position "O").



2. Connect the machine to a mains power socket (picture above, C) using the provided mains connection cable (picture above, B).

Depending on the country of delivery, the mains connection cable may have a different plug for the public power supply than the one shown.

Disconnecting the mains connection cable:

3. Pull off the cable at the plug.

Connecting to a data host

The print data can alternatively be transmitted via one of the data interfaces:

- Ethernet
- USB
- Serial interface

The desired data interface is prompted by the setup wizard the first time you switch on the machine. The default setting is automatic recognition of the data interface.

Without using the setup wizard, the interface type can be selected with the parameter Interface > Print interface.

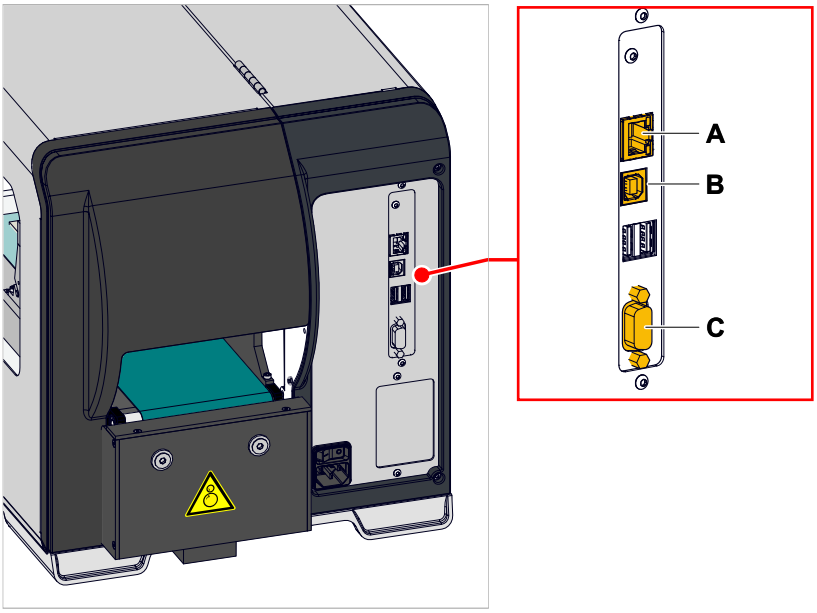


Fig. 32: Data interfaces at the XTP 60x (**A** Ethernet, **B** USB, **C** RS 232).

► Connect the data interface to the data host using a commercially available data cable..

You might have to set other parameters as well, depending on the interface chosen:

- Settings for the serial interface: Interface > Serial Port 1
- Settings for the Ethernet interface: Interface > Network

  ► Call the network setup wizard System > Setup Wizards = “Network” to call all relevant parameters automatically.

As an alternative to transmission via a data line, print jobs can also be stored on an external storage medium and called up from there.

SWITCHING ON/OFF

Switching on

► Set the mains switch (A) of the machine to "I" (On).

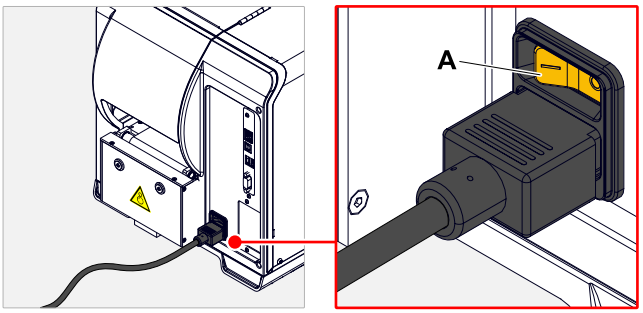


Fig. 33: Mains switch at the XTP 60x.

Shortly after switching on the printer, during startup, the following informations show up on the screen:

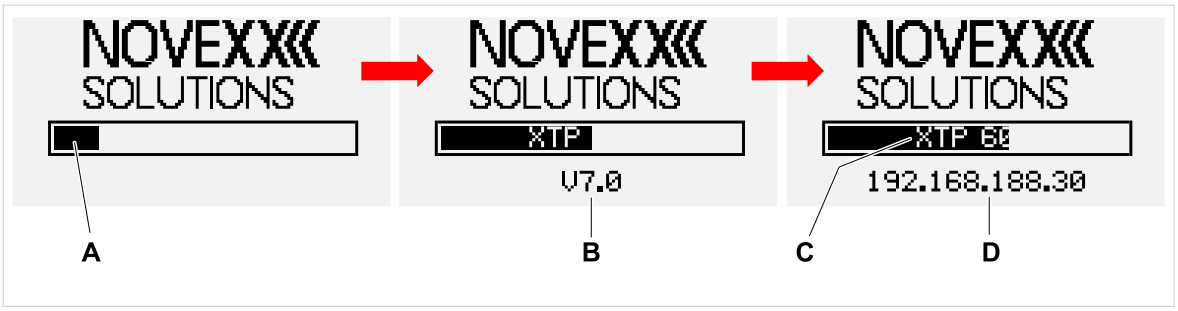


Fig. 34: Changing informations on the screen during startup: **A** Progress bar, **B** Firmware version, **C** Printer type, **D** (Optional) IP address (if Ethernet is selected as data interface).

After startup, the “Ready” display appears:

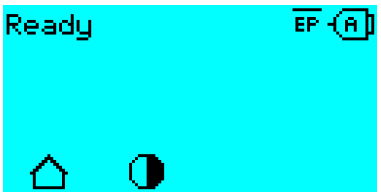


Fig. 35: Display “Ready” on the machine ready for operation.

Switching off

► Set the mains switch (A, figure above) of the machine to "O" (Off).

Standby Mode (remote control panel)

Activating standby mode:

► Press the on/off key (A) on the(remote) control panel for approx. 3 seconds.

‖ In standby mode, the motion control is switched off, the CPU stays on. ‖

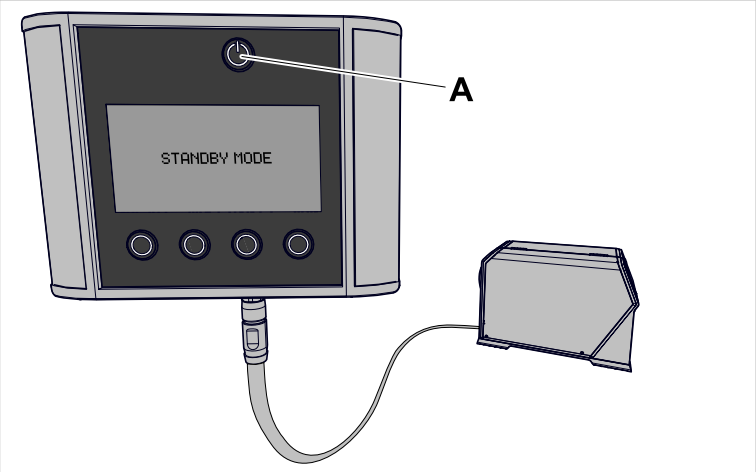


Fig. 36: Display in standby mode.

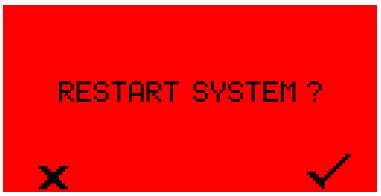
Deactivating standby mode:

► Press the on/off key (A) on the(remote) control panel for approx. 3 seconds.

Restart

A restart is faster than switching the machine on and off completely, as only part of the firmware is restarted.

► Press the keys 1 + 2 + 3 simultaneously. Display:



► Press the ✓ key to confirm and to trigger the restart.

BASIC SETTINGS

Basic settings with the setup wizard

The setup wizard controls the automatic retrieval of basic settings in the parameter menu that are essential for the operation of the printer.

After the first starting-up of the printer, the display shows the query „Run Setup Wizard?“.

After selecting "Yes", the parameters for the most important basic settings are queried in several groups. The relevant parameters are automatically called up for this purpose. After the basic settings, e.g. for the language or the printer interface, the network and dispense settings are optionally queried (yes/no query in each case).

Which parameters are called also depends on the selection in the preceding parameter. The last step is to display a summary of the settings made (fig. below), which must be confirmed by pressing a key.

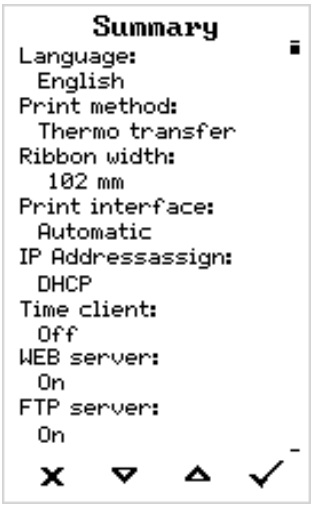


Fig. 37: Summary of the settings done by the wizard (Example, merged by image processing, in fact it must be scrolled to see all lines).

Execute settings:

► Press the ✓ key.

A restart takes place and the settings are made.

Discard settings:

► Press the ✗ key.

The setup wizard then starts again until either the settings are made or “Run Setup Wizard?” is answered with “No”.

If “No” is selected in response to the initial question, the setup wizard will not start and the prompt “Run Setup Wizard?” will not appear even after a restart. There are then two possibilities to carry out the basic settings:

- EXPERTS Call up and set the corresponding parameters manually
- Start the setup wizard manually (parameter System > Setup Wizards)

Operation

INSERTION DIAGRAM

XTP 60x with basic loader

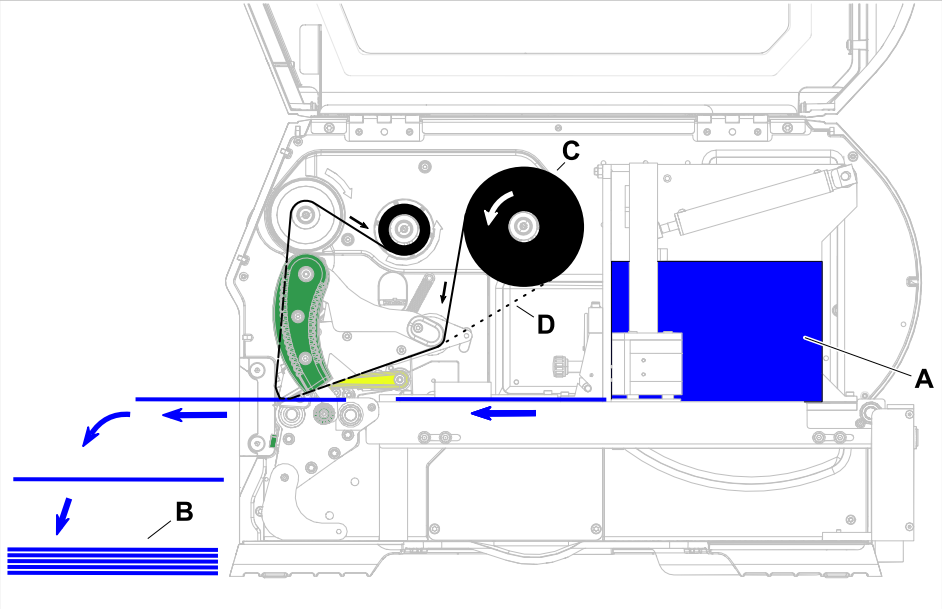


Fig. 38: Insertion diagram for XTP 60x with basic loader. **A**: label stack, **B**: printed labels, **C**: ribbon roll, **D**: path for thermotransfer ribbon wound with ink outside.

XTP 60x with extended loader

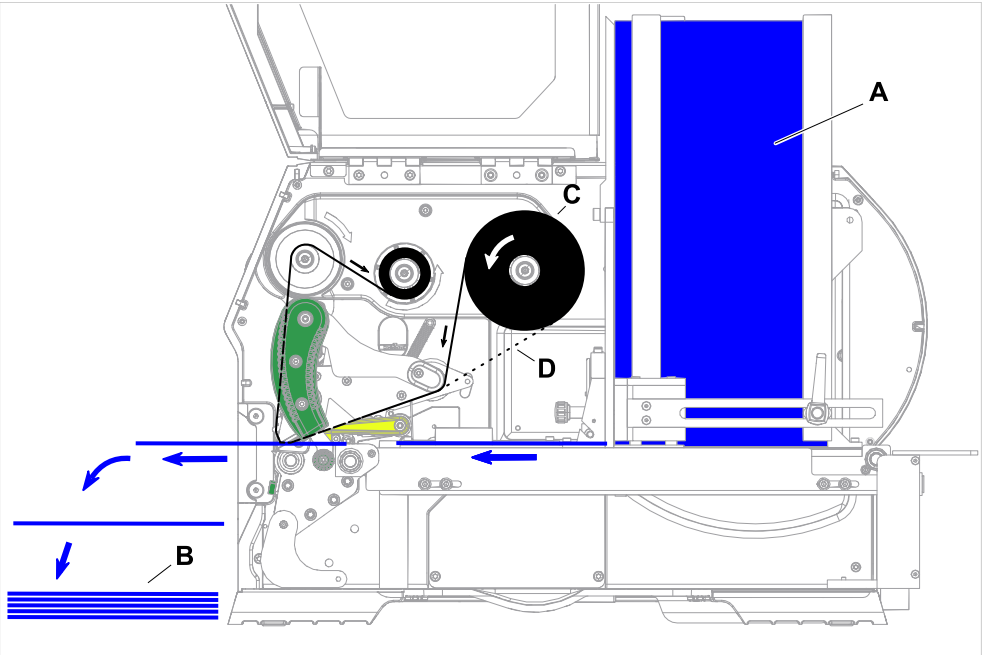


Fig. 39: Insertion diagram for XTP 60x with extended loader: **A**: label stack, **B**: printed labels, **C**: ribbon roll, **D**: path for thermotransfer ribbon wound with ink outside

Related tasks

Inserting ribbon on page 62

INSERTING AND REMOVING RIBBON

WARNING!
Sharp-edged clamping plates on the ribbon mandrels!
Danger of cuts on the hands.

► Be careful when sliding on/removing the ribbon roll.

WARNING!
During operation, the print head can become hot!

► Be careful when touching the print head.

WARNING!
Danger of injury due to moving and rapidly rotating parts.

► When working on the machine, do not wear loose jewellery, long sleeves, long hair, and similar.

► Before inserting the label roll ensure that the machine is in offline mode (Home screen).

► Close the devices cover before printing.

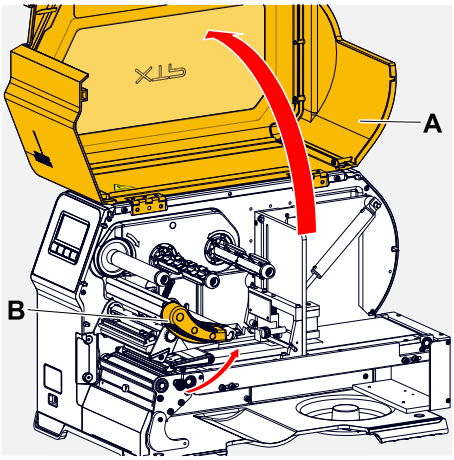
Inserting ribbon

Before you begin

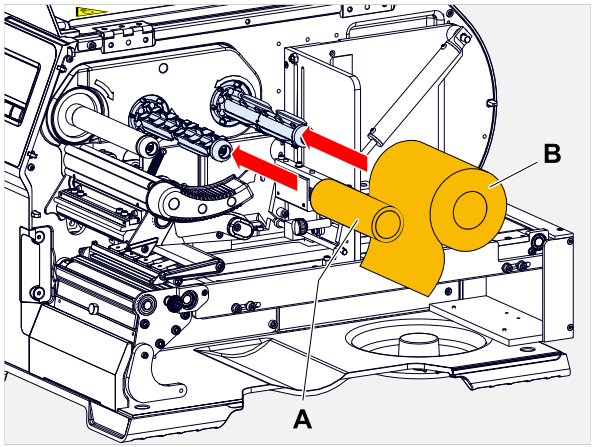
- Machine is stopped (“Home” screen)
- Used ribbon has been removed
- New ribbon roll is at hand (ribbon must match the technical data)
- At first time loading: Empty cardboard sleeve is at hand
- The warning notes about inserting ribbon have been read and understood (see “Inserting and removing ribbon” on page 62)

Procedure

1. Open the front hood (A, figure below).



2. Open the pressure lever on the print head (B, figure above).
3. Push the empty cardboard sleeve onto the rewinding mandrel until it stops (A, figure below).

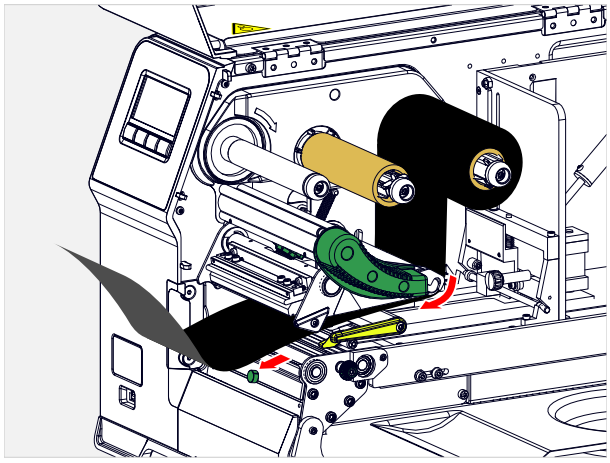


4. Push the ribbon roll onto the unwinding mandrel until it stops (B, figure above).

   Depending on the winding direction of the ribbon (color side inside or outside), the roll must be inserted differently:

   – Colour side inside: *counterclockwise* rotation (pictures)
   – Colour side outside: *clockwise* rotation

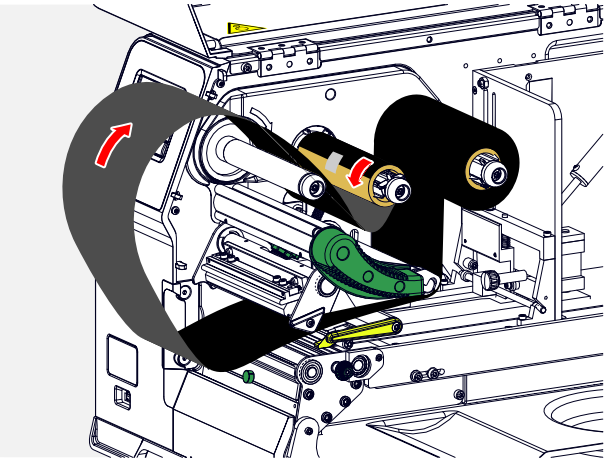
5. Insert the ribbon under the print head as shown:



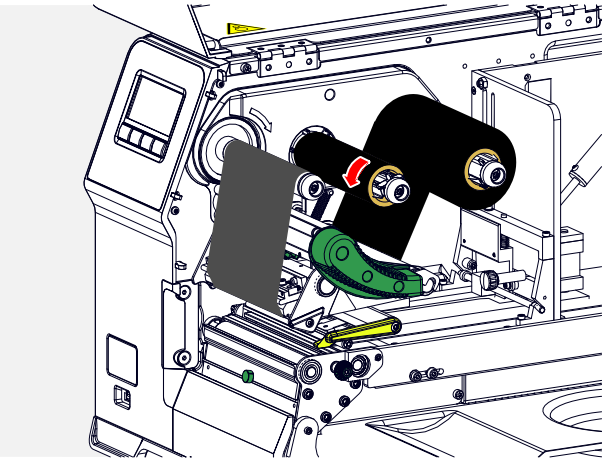
6.

> CAUTION!
> Poor printing results due to wrinkling of the ribbon!
>
> ► Tape the ribbon to the cardboard core as described (in no case wrap or knot the ribbon end around the cardboard core - the knot would lead to wrinkling!)

Insert the ribbon into the printer as shown. Fasten the end of the ribbon with adhesive tape to the empty ribbon sleeve (figure below).



7. Rotate the rewinding mandrel a few turns in a counter-clockwise direction until the ribbon is free of folds.



8. Close the pressure lever and the front hood.
9. (Optional) If the ribbon type is used for the first time: Make the following parameter settings in the menu Print > Material > Ribbon:
   – Ribbon width on page 50
   – Color Side on page 50
   – Ribbon length on page 50
   – Outer ribbon Ø on page 50
   – Inner ribbon Ø on page 50

Related reference

Insertion Diagram on page 60

Removing the used up ribbon

Before you begin

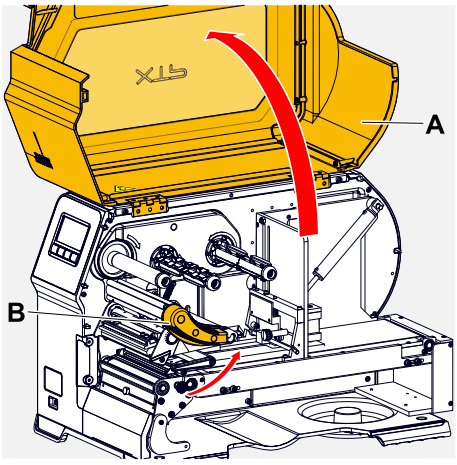
- Machine ist stopped (“Home” screen).
- The warning notes about inserting ribbon have been read and understood (see “Inserting and removing ribbon” on page 62)

About this task

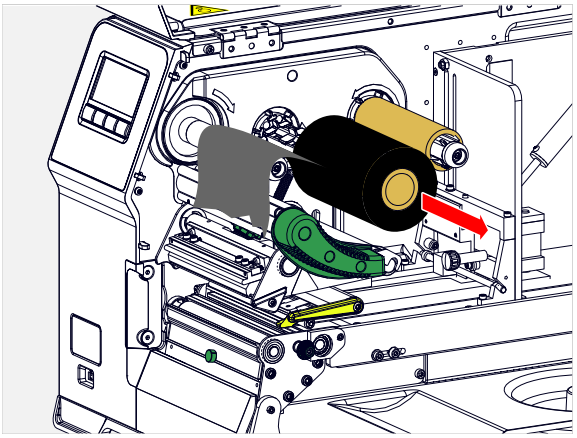
If a ribbon roll is used up, the used ribbon is all wound up on the rewinding mandrel and has to be removed from there. The ribbon end is signaled by the appropriate status message or warning on the operation panel of the machine. If a signal beacon is connected, the lamps light up.

Procedure

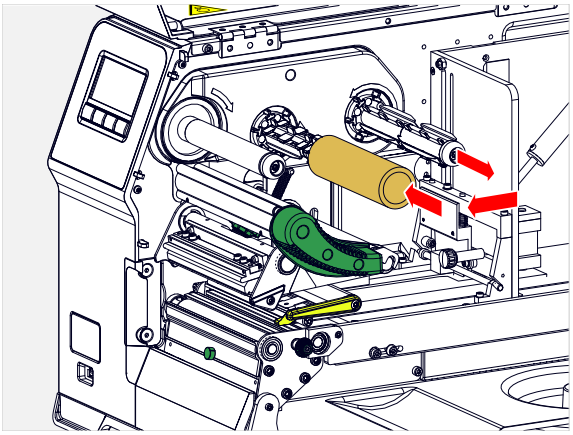
1. Open the front hood (A, figure below).



2. Open the pressure lever on the print head (B, figure above).
3. Pull the roll of used ribbon from the rewinding mandrel:



4. Remove the empty cardboard sleeve from the unwinding mandrel and push it onto the rewinding mandrel.



5. Clean the print head.

What to do next

Inserting a new ribbon roll.

Alternating use of different sorts of ribbon

Before you begin

The warning notes about inserting ribbon have been read and understood (see “Inserting and removing ribbon” on page 62)

About this task

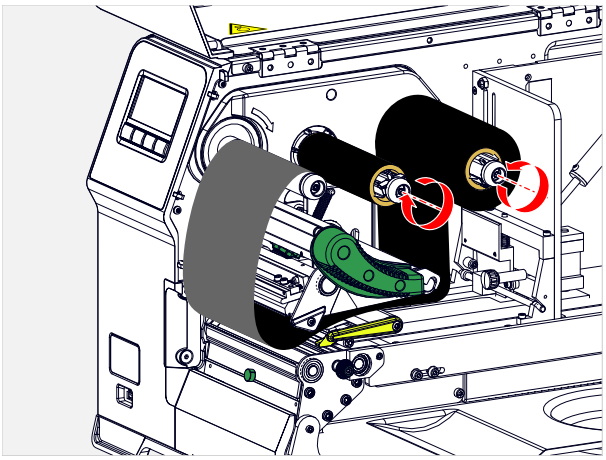
To switch between *different types of ribbons*, there is no need to cut off the ribbon each time and then insert it and fasten it to the ribbon rewinder.

It’s easier as follows:

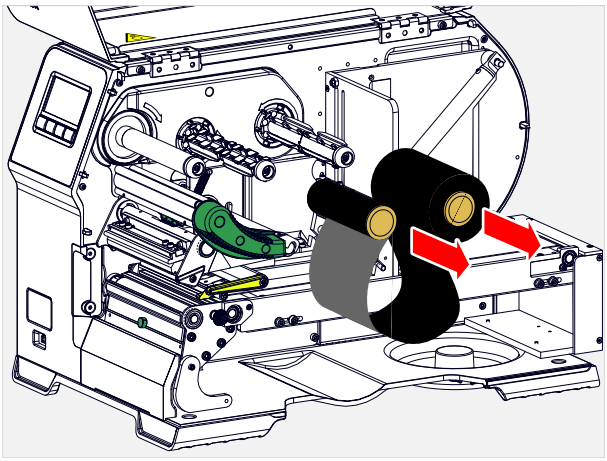
Procedure

1. Open the pressure lever.

2. Loosen the ribbon between the mandrels:



3. Remove both rolls of ribbon from the mandrels. Pull away the ribbon sideways from the print head:



‖ Store your frequently used ribbons as pairs of rolls. ‖

Insert a different pair of rolls as follows:

4. Push the ribbon between the rolls sideways below the print head.
5. Push the ribbon rolls onto the mandrels and tighten the ribbon.

INSERTING LABEL MATERIAL

WARNING!
During operation, the print head can become hot!
► Be careful when touching the print head.

WARNING!
Danger of injury due to moving and rapidly rotating parts.
► When working on the machine, do not wear loose jewellery, long sleeves, long hair, and similar.
► Before inserting the label roll ensure that the machine is in offline mode (Home screen).
► Close the devices cover before printing.

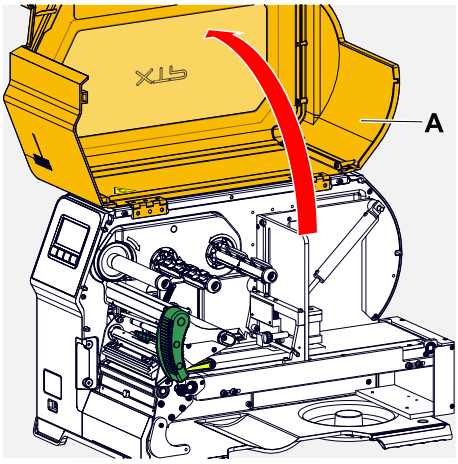
XTP 604 with basic loader

Before you begin

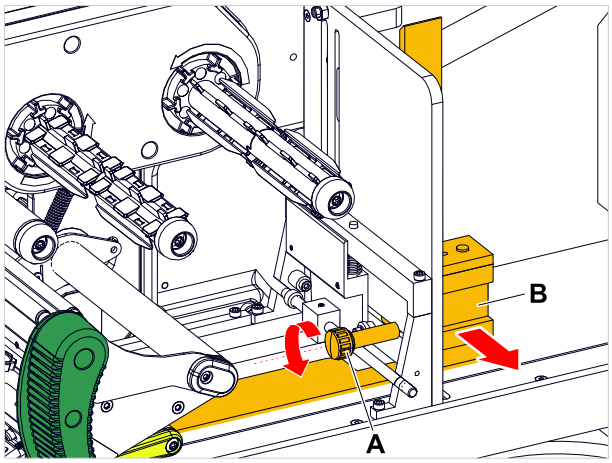
- Machine is stopped (“Home” screen)
- The label material is available as stacked single tags.
- The label separator was adjusted to the label thickness.
- The warnings for loading label material have been read and understood (see Inserting and removinglabel material)

Procedure

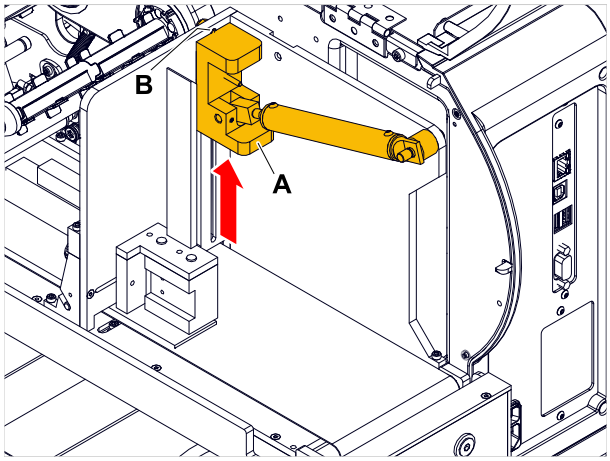
1. Open the front hood (fig. below, A).



2. Loosen the thumb screw (A) and slide the label guide (B) outwards.

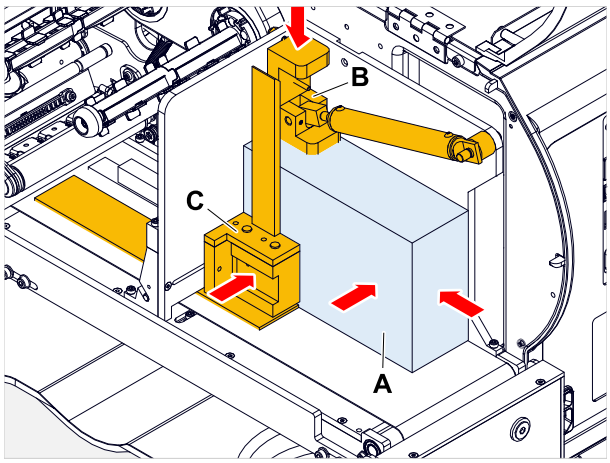


3. Push the pressure element (A) upwards until it is held by the spring bolt (B).



4. Place the label stack (A) neatly against the rear and front guide wall. Press the pressure element (B) lightly onto the stack. Slide the front side guide (C) towards the stack and fix it with the knurled screw.

   – The label stack must not be jammed between the guides.
   – The pressure element must no longer be held by the spring bolt.



5. Close the front hood.

What to do next

If the label stock is different from the one used before:

► Set the position of the label sensor.

Related tasks

Positioning the Label Sensor on page 74
Setting the tag separator on page 72

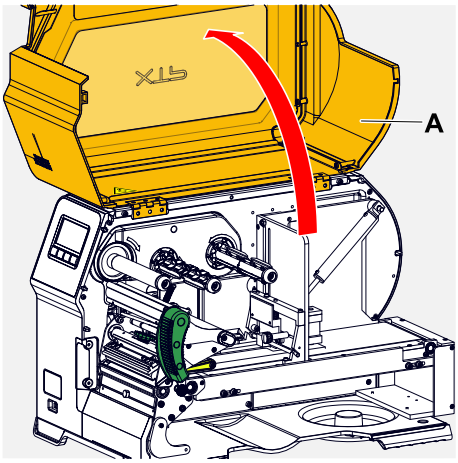
XTP 604 with extended loader

Before you begin

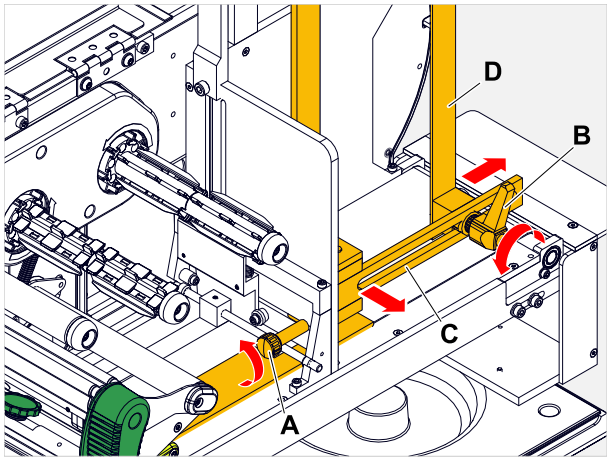
- Machine is stopped (“Home” screen)
- The label material is available as stacked single tags.
- The label separator was adjusted to the label thickness.
- The warnings for loading label material have been read and understood (see Inserting label material)

Procedure

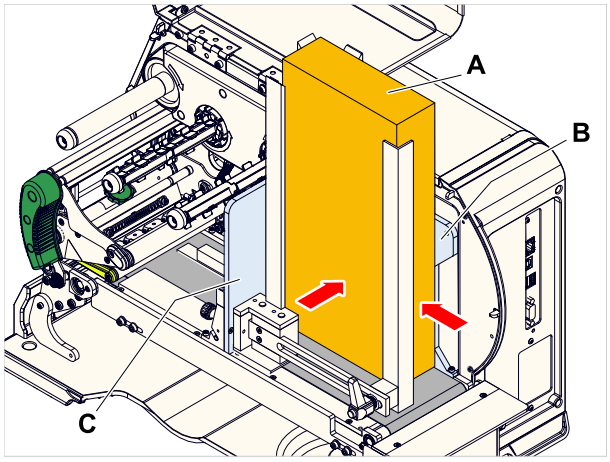
1. Open the front hood (fig. below, A).



2. Loosen the knurled screw (A) and slide the entire side guide (C) outwards. Release the clamping lever (B) and slide the stacking guide (D) backwards.

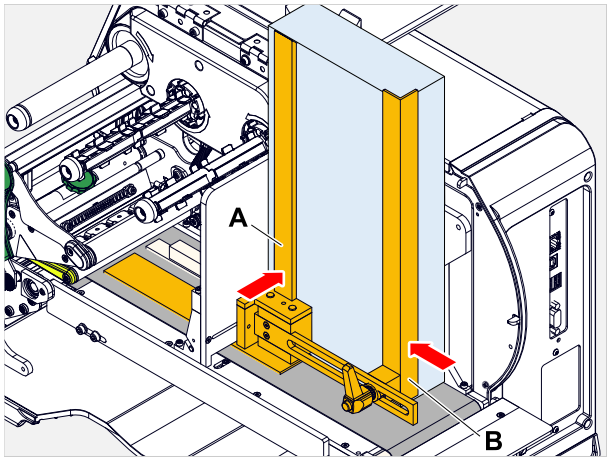


3. Place the label stack (A) neatly against the rear (B) and front (C) guide wall.



4. Slide the side guide (A) up to the stack, then secure it with the knurled screw. Slide the rear stacking guide (B) up to the edge of the stack, then secure with the clamping lever.

‖ The label stack must not be jammed between the guides. ‖



5. Close the front hood.

What to do next

If the label stock is different from the one used before:

► Set the position of the label sensor.

Related tasks

Positioning the Label Sensor on page 74
Setting the tag separator on page 72

SETTING AND MONITORING

Setting the tag separator

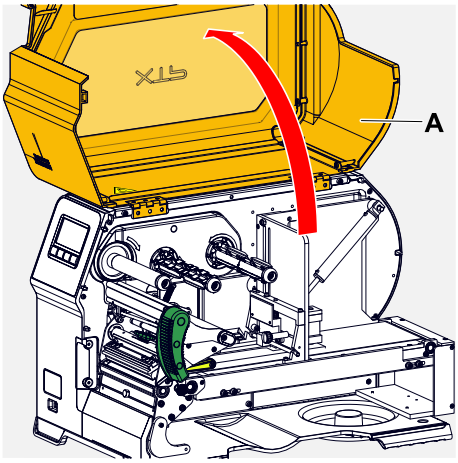
The description shows the XTP 604 with basic loader, but applies equally to the XTP 604 with extended loader.

About this task

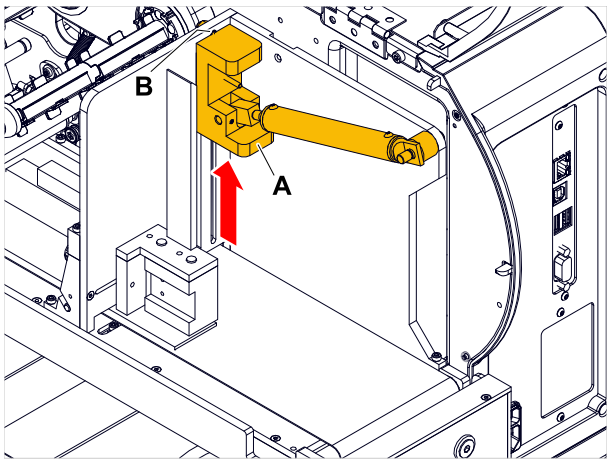
Before printing a new label type, the separator must first be set to the label thickness. This ensures that only one label at a time is pulled out of the bottom of the stack.

Procedure

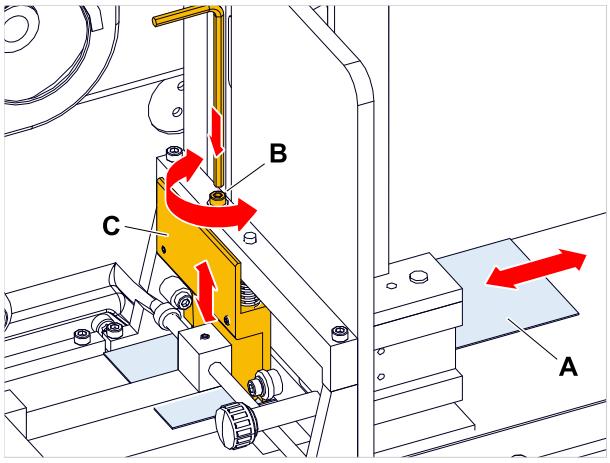
1. Open the front hood (A, fig. below).



2. (Only XTP 604 with basic loader) Push the pressure element (A) upwards until it is held by the spring bolt (B).



3. Slide a single label (A) under the label separator (C) as shown. Grasp the label at the rear end and push it back and forth repeatedly. At the same time, turn the screw (B) clockwise to lift the tag separator (C) until it no longer touches the label.



– *Lowering: Turn screw (B) counterclockwise*
– *Lifting*: Turn screw (B) *clockwise*

4. CAUTION!
Risk of damaging the conveyor belt and/or blocking the feed motor
► Never make this adjustment without a label under the label separator.
► Never unscrew the adjusting screw of the label separator so far that the label separator rests on the conveyor belt.

Slide the label (image above, A) back and forth repeatedly. At the same time, lower the label separator (image above, C) by turning the screw (image above, B) counterclockwise until a slight resistance can be felt when pushing the label.

Positioning the Label Sensor

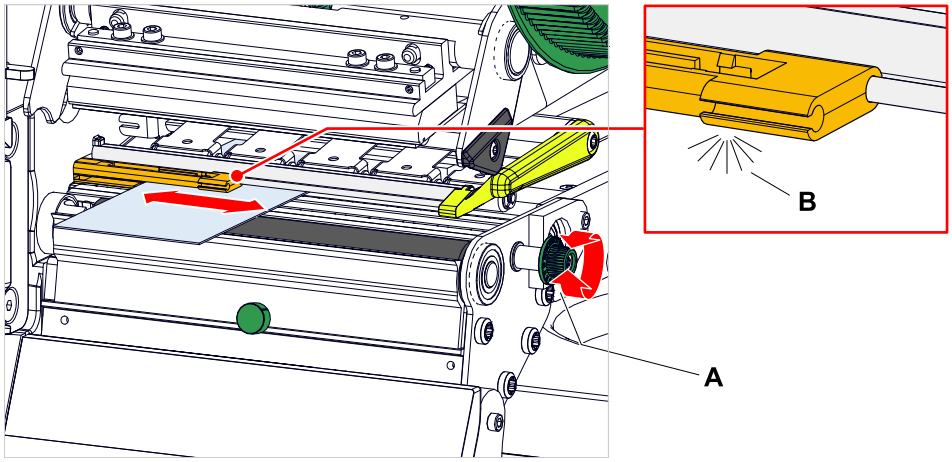
About this task

Adjusting the label sensor position is necessary, if

- the machine is put into operation for the first time
- a material change takes place on wider or narrower material or on material with different punching form/type

Procedure

1. Open the print head pressure lever.
2. Insert a label.
   ‖ The label must be on the left-hand side. ‖
3. Move the label sensor crosswise to the printing direction by turning the rotary knob (A) until the sensor (B) is centered over the label.
   ‖ The sensor (B) is somewhat set back at the label sensor holder. ‖



4. Remove the label again.
5. Close the print head pressure lever.

Settings in the Parameter Menu

The settings described below are generally included in the print job, in which case they do not need to be made. Manual settings that were made before a print job was transferred will be overwritten by the settings in the print job.

- Label length on page 75
- Material width on page 76
- Material type on page 76
- Print process on page 76
- Temperature Compensation on page 76

Label length

> Strictly speaking, it is not the label length that is measured, but the distance from the front edge of one label to the front edge of the next, i.e. label length + label gap.

► Toggle to the “Home” screen.

A) To measure label length automatically:

► Press the keys 3 + 4.



Fig. 40: The label length is being measured.

The printer moves the label material forward until the two label starting marks have moved through the label sensor. The label pitch determined in this way is displayed (see fig. below) and transferred to parameter Print > Material > Label > Material length. Parameter Print > Material > Label > Material type is set to “Punched”.



Fig. 41: Dispay of the measured label length.

B) To enter the label length manually:

1. Measure label length (B).
2. Call Print > Material > Label > Material length and enter the measured value in millimetres.

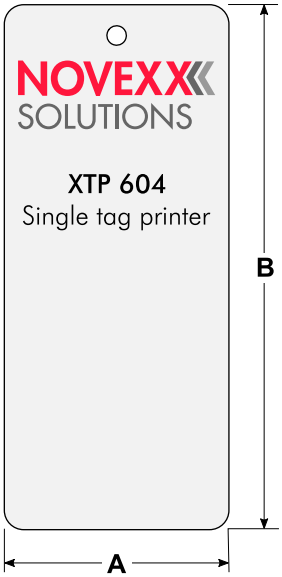


Fig. 42: Label stock (**A**: Label width, **B**: Label Length)

Material width

1. Measure the width of the label (A).
2. Call Print > Material > Label > Material width and enter the measured value in millimetres.

Material type

> If the automatic material length measurement function is used, the material type is automatically set to “Punched”.

► Set Print > Material > Label > Material type to “Punched”.

Print process

Printing without ribbon (direct thermal):

► Print > Material > Label > Print method = “Thermal printing”.

Printing with ribbon (thermal transfer):

► Print > Material > Label > Print method = “Thermo transfer”.

Temperature Compensation

The print contrast is heavily dependent on the temperature of the print head. This can be set using the parameter Print > Print contrast or, during printing, after pressing key 2.

When the printer is being used for a big print job, the temperature of the print head and the print contrast increase during printing. This increase is greater, the larger the print job and the larger the amount of black to be printed.

In extreme cases, this rise in temperature can lead to smearing in fine structures when printed, e.g. barcodes arranged crosswise to the printing direction. To avoid this, the firmware constantly checks and corrects the print head temperature. The precondition for this is that the parameter System > Print Control > Temp. reduction is set to a value > 0 (Default: 20%).

The temperature compensation is the greater, the higher the setting of the parameter System > Print Control > Temp. reduction is (see fig. below).

Parameter	Function
Print > Print contrast	Sets the print contrast, i.e. indirectly, the print head temperature (actually adjusts the driving power of the print head).
System > Print Control > Temp. reduction	Sets the correction factor for the temperature compensation. The higher the selected setting, the greater the reduction of the driving power when the print head temperature rises.

Table 14: Parameters for setting the temperature compensation.

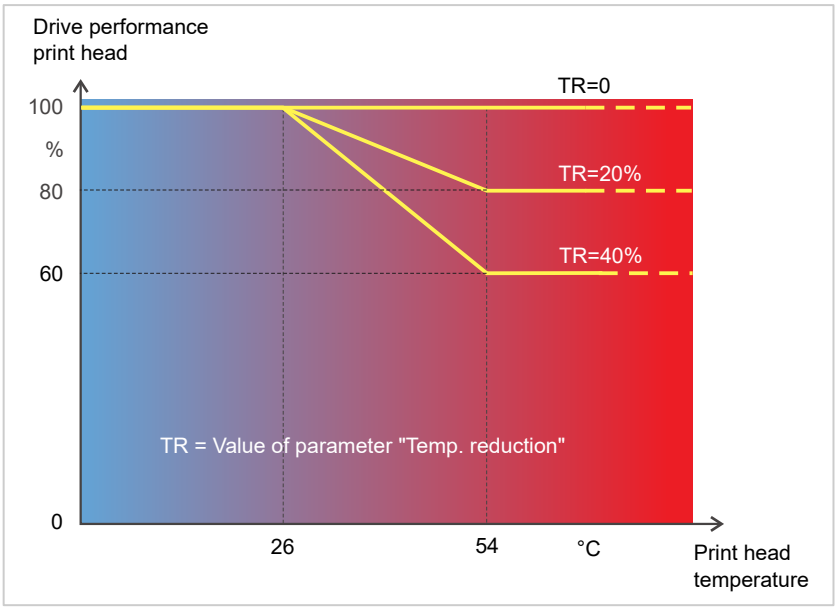


Fig. 43: With the parameter System > Print Control > Temp. reduction activated, the driving power of the print head – and therefore indirectly the print contrast – are reduced. Reduction starts at a temperature of 26°C. The maximum value is maintained at 54°C and above.

Readout example:

The printing layout contains a lot of black areas. For this reason, the temperature reduction is activated with 40%.

► System > Print Control > Temp. reduction = 40%.

Now, if the print head temperature rises above 26°C, the driving power will be reduced automatically.

Reading out the diagram results in: With a given print head temperature of approx. 40 °C, the driving power is reduced to approx. 80%; with a supposed print head temperature of 54 °C or above, it is reduced to 60%.

Monitoring functions

The following functions monitor machine operation:

- Missing labels on page 78
- Ribbon reserve on page 78
- Ribbon end on page 79

Missing labels

Normally a missing label on the label web does not interfere with print operation. Label feed continues running until the start of a label has moved up under the label sensor again.

It may be necessary in some cases, however, to report the missing labels. When function System > Print Control > Miss. label tol. is set, an error message can be generated after one, or after several missing labels:

```
Status num:     5001
No gap found
```

At the same time the printer stops.

Ribbon reserve

The ribbon reserve is displayed during printing as remaining length in meter (A):

> The display of the ribbon reserve only begins after some rotations of the ribbon roll.

To be able to display the value of the remaining ribbon length as exact as possible, some characteristics of the ribbon roll have to be set:

► Set Print > Material > Ribbon > Ribbon length to the ribbon length in meters.

► Set Print > Material > Ribbon > Outer ribbon Ø to the outer-Ø (D) of the ribbon roll in millimeters.

► Set Print > Material > Ribbon > Inner ribbon Ø to the inner-Ø (d) of the ribbon roll in millimeters.

> Inner-Ø ribbon roll = Outer-Ø ribbon core!
>
> The default setting matches the NOVEXX Solutions standard ribbon 10287-600-xxx.

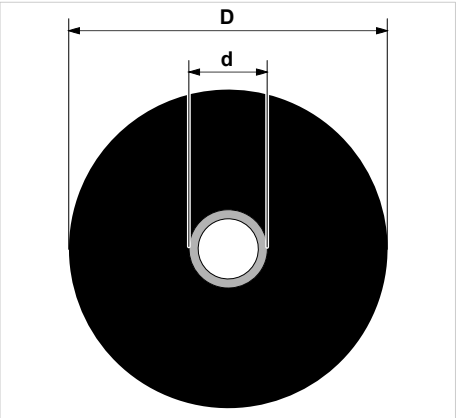


Fig. 44: Outer (D) and inner (d) diameter of the ribbon roll.

To monitor the ribbon reserve, a critical ribbon length can be set. If the remaining length falls below this level, a warning or an error message appears - depending on the setting.

► Set System > Print Control > Ribbon end warn. to the desired critical ribbon length in millimetres.

► Set System > Print Control > Ribbon warn stop to the desired behavior:

- *Off*: Printer shows ribbon warning and does *not* stop:



Fig. 45: Ribbon warning during a print job: yellow background, the ribbon icon flashes.

- *On*: Printer shows ribbon warning and shorty afterwards an error message and stops after the current label:

```
Status num: 5110
Ribbon low
```

Ribbon end

Once the end of the ribbon has been wound away and the unwinding mandrel no longer rotates, the following message will appear:

```
Status num: 5008
Ribbon end
```

► Proceed as described under .

‖ End-of-ribbon detection can be shut off when required, e.g. for direct thermal printing: ‖

► To do this, set Print > Material > Label > Print method to “Thermal printing”.

PRINTING

Creating Print Jobs

There are two ways to create a print job:

- Using *layout software*

  Layout software may include any type of software that has a print function (for example text processing). Special label layout software is more suitable, for example NiceLabel [38]. Prerequisite is an installed printer driver.

  Find the appropriate *printer driver* and an installation instruction on our web page [39]. The driver supports the following Windows operation systems:

  Windows 7 / Windows 8 / Windows 8.1 / Windows 10 / Windows 11 / Windows Server 2008 / Windows Server 2008 R2 / Windows Server 2012 / Windows Server 2012 R2 / Windows Server 2016 / Windows Server 2019 / Windows Server 2022.

- *Coding print jobs with Easy Plug*

  EXPERTS The label layout is described by a sequence of Easy Plug commands saved in a text file. This method requires good knowledge of the command language Easy Plug.

Transferring a Print Job from a Host by Means of Layout Software

Describes how to tranfer a print job from a host using a data cable and layout software.

Before you begin

- The data interfaces of host and printer are connected with a suitable data cable
- The data interface is set accordingly in the printer's parameter menu
- Layout software and a suitable driver are installed on the host

Procedure

1. Select a suitable data interface in the layout program.
2. Open an stored label layout or create a new layout.
3. Start printing in the layout program.

38 www.nicelabel.com

39 www.novexx.com

Transferring a Print Job from a Host by Means of a Command file

Describes how to tranfer a print job from a host using a data cable and a text file containing Easy Plug commands (“command file”).

Before you begin

- The data interfaces of host and printer are connected with a suitable data cable
- The data interface is set accordingly in the printer's parameter menu

Procedure

1. At the host: open the Windows command prompt window.
2. Open the folder that contains the command file.
3. (Optional) Serial interface: `copy testjob.txt com1`

4. (Optional) Ethernet/USB interface: `copy testjob.txt \\ComputerName\ShareName`
   – *ComputerName*: can be found under Windows 10 as follows:
      a. Press the ⊞ key. The start menu opens.
      b. Type “System Information” into the search field. The window “System Informations” opens.
      c. In the right part of the window, seek the entry “System Name”. The string right of it is the Computer Name.
   – *ShareName* represents the share name for a printer connected to a specific port, such as the USB port or the TCP/IP port. Enter the ShareName as follows:
      a. Press the ⊞ key. The start menu opens.
      b. Type “Printers & scanners”. Acknowledge with the Enter key. The window “Settings > Printers & scanners” opens.
      c. Click on the desired printer name.
      d. Click “Manage”.
      e. Click “Printer properties”.
      f. Open the “Sharing” tab (fig. below).
      g. Enter a name into the field “Share name” and check “Share this printer”.
      h. Click “OK”.

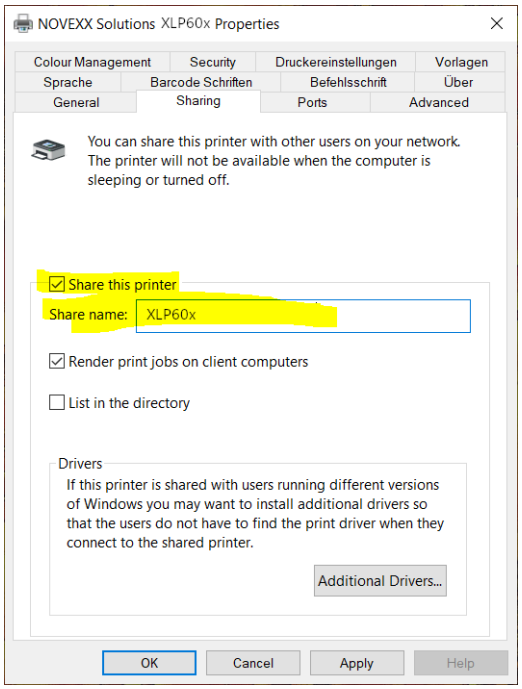


Fig. 46: Entering a share name under Windows 10.

Starting a Print Job from an External Memory Medium

Before you begin

- The print job is stored on an external storage medium (e. g. USB thumb drive) in folder `\Formats`.
- The name of the print job file ends with `.for`
- Drive letter `C:` must be assigned to the storage medium (that is, Interface > Drives > Drive C must be set to that storage medium on which the file with the print job is stored, that is “USB1” or “USB2”)

Procedure

1. Switch off the printer.
2. Connect the memory medium to the printer.
3. Switch on the printer.
   The printer shows the “Ready” screen (cyan).
4. Press the keys 2+4 to switch to standalone mode.
   A file selection dialog for memory media appears:

   ‖ If an external storage medium is not displayed: Press key 1. This updates the list. ‖



5. Select a memory medium and confirm the selection.
   A file selection dialog appears, which shows the printjobs stored on the selected memory medium:



6. Select a print job with the keys 2 and 3. Press key 4 to load the print job.
   Another selection dialog appears. It offers to change the print amount, which is initially defined in the print job (fig. left). Depending on the print job, there can be more input fields (fig. right).

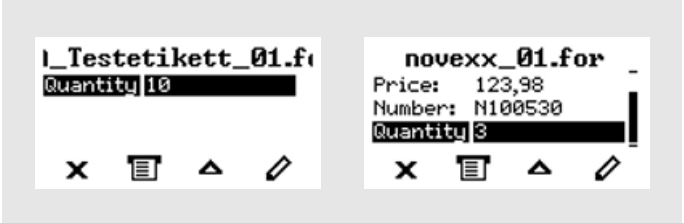


Fig. 47: File selection in standalone mode (left: standard field for querying the print amount; right: additional data input fields)

7. Press key 2 to start the print job without changing the print amount.

> To change the print amount or other input fields, see figure below.
>
> If the printer showed the “Ready” screen before it was toggled into standalone mode, the printing starts immediately.

8. Press the keys 2+4 to toggle to the “Ready” screen.

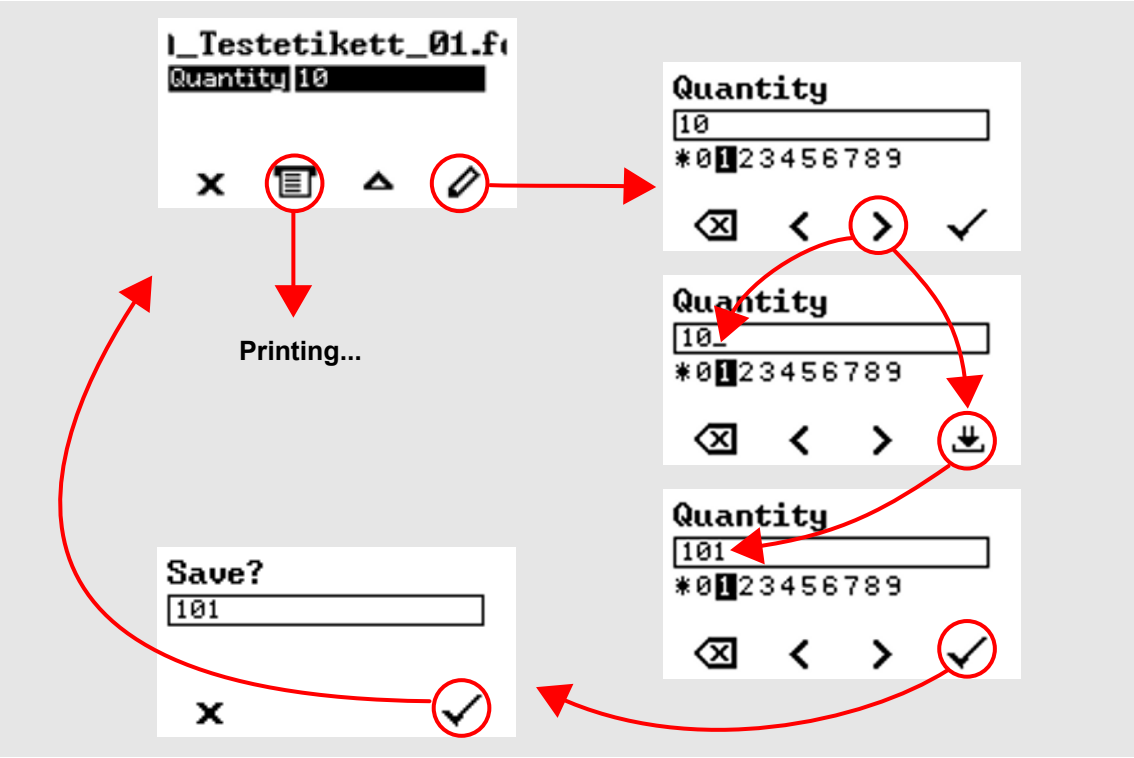


Fig. 48: Changing the print amount in standalone mode.

Starting and Monitoring a Print Job

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

- The printer is switched on
- The display shows the “Ready” screen
- A print job has been transmitted and interpreted
- The label sensor has detected the start of a label

> This is the case at the earliest after 10 cm of material has been advanced, as these 10 cm are used by the control unit exclusively to calculate the diameter of the ribbon rolls. This means that if the start of a label has already passed the label sensor, it is ignored.

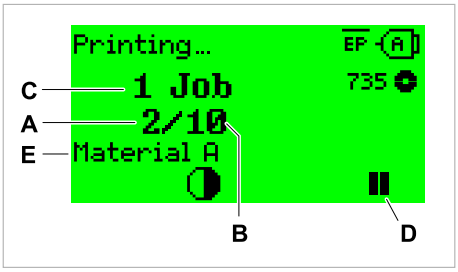


Fig. 49: Display during the printing (**A**: Already printed labels of the current print job, **B**: Labels to be printed of the current print job, **C**: Amount of queued printjobs, **D**: Pause key, stops the printing).

If the printer shows the “Home” screen:

► Press the key, to toggle to the “Ready” screen, to start printing.

Display examples:



Fig. 50: Print job with endless print amount.



Fig. 51: Stopped print job. Press key 4 to continue printing.

STANDALONE OPERATION

Requirements and Functions

Requirements

- *External memory medium* (USB thumb drive)
- *Computer*, to write on the memory medium
- (Optional) *Keyboard*, simplifies entry of variable data (see chapter Functions with external keyboard on page 88)

Functional Description

Standalone operation means the printer can be operated without it needing to be connected to a host computer. For this purpose, a computer is used to store the print job on a memory medium. After the memory medium is connected to the printer, the operator can start the print jobs on demand. For this, he uses the printer control panel or a keyboard connected to the printer. Variable data can also be entered via the control panel or the external keyboard.

The standalone mode can always be accessed from the „normal“ printer operation.

► Press the keys 2+4 simultaneously.

It is helpful to imagine two consoles, between which can be switched by pressing the keys 2+4.

Console „Normal operation“	⟷	Console „Standalone operation“
„Ready“ screen	Keys 2 + 4	Selecting print jobs
„Home“ screen		Inserting field contents
Message mode		Inserting print amounts
„Settings“ screen		Starting print jobs
		Error messages are faded in

Table 15: Functions and display texts in normal and in standalone operation mode.

Standalone operation in brief:

- Printing without computer connection
- Data entry via control panel or keyboard
- Reading print job from an external memory medium
- Entry or selection of field content
- Updating Firmware from an external memory medium

Selecting Files from an External Memory Medium

Before you begin

- The file is stored on an external memory medium (e. g. USB thumb drive) in folder `\FORMATS`
- The file has one of the extentions `.for` (print job or setup file) or `.tar` (firmware)

- Drive letter `C:` must be assigned to the storage medium (that is, Print interface > Drives > Drive C must be set to that storage medium on which the file with the print job is stored).

Procedure

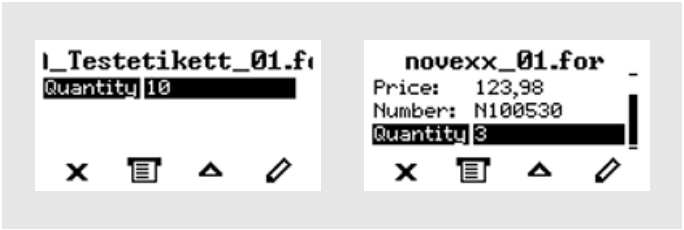
1. Switch off the printer.
2. Connect the memory medium to the printer.
3. Switch on the printer.
   The printer shows the “Ready” screen (cyan)
4. Press the keys 2+4 to switch to standalone mode.
   A file selection dialog for memory media appears:



5. Select a memory medium and confirm the selection.
   A file selection dialog appears, which shows the printjobs stored on the selected memory medium:



6. Select a print job with key 2 and 3. Press key 4 to load the print job.
   Another selection dialog appears. As a standard, the print amount can be changed, which is defined as default in the print job (fig. left). Depending on the print job, there can be more than one input fields (fig. right).



7. Press key 2 to start the print job without changing the amount.

   > For change of the print amount or of other input values, see fig. below.
   >
   > If the printer showed the “Ready” screen before switching into standalone mode, the printing starts immediately.

8. Press keys 2+4 to switch to the “Ready” screen.

Functions with external keyboard

Suitable keyboards

Keyboards with USB connection are suitable.

> Before first use, check if the intended keyboard really works with the printer.
>
> The matching keyboard layout is set with parameter Options > Keyboard.

Key assignment

The keys on the operation panel are assigned to function keys on the external keyboard according to the table below. The function keys and the two additionally listed key combinations work in normal operating mode *and* in standalone mode.

Keyboard key(s)	Printer key	Function
	1	Depends on context
	2	
	3	
	4	
	none	Delete the current print job
	2 + 4	Toggle between normal and standalone mode

Table 16: Assignment of operation panel keys to keyboard keys

The following keys and key combinations on the external keyboard work only in standalone mode:

Keyboard key	Function
	Delete the character left of the cursor
	Confirm a modification
	Discard a modification
	Move the cursor to the left
	Move the cursor to the right
	Insert the selected character into the string
	Jump to the beginning (e. g. of a selection list)
	Jump to the end (e. g. of a selection list)

Quick selection

If an external keyboard is connected, files can be selected from a list by typing in the first letter of the file name.

Example:

After changing to the standalone mode and selecting the memory medium, the following is displayed:



A file named `novexx.for` is supposed to be started.

1. On the keyboard, press the key for the first letter of the wanted file name , e. g. „n“. Display:



The filter icon stands for the activated filter function. Through the filter appear only those file names that start with „n“ (see fig. above). If another character is typed in, e. g. „o“, only file names that start with „no“ are listed (see fig. below).



> The filter is case sensitive!

Deactivating the filter: press the Esc or Backspace key.

2. Press the enter key (or F8) to select the file.

Executing Different File Types

Executing print jobs

Files with the extention `.FOR` are interpreted as print jobs.

All input fields are polled, which are defined as such in the print job. Next, the print quantity is requested. As soon as the print quantity is confirmed, the print job is executed. From now on, all information about the job is displayed in the “Normal operation” console. While the print job is processed, it is started newly in the “Standalone operation” console. The input fields are polled again, with the previous entries as default.

> Each print job file may contain *only one* print job. If any print job file contains more than one print-jobs, only the first print job is executed.
>
> The new start of the print job can be avoided by setting the parameter System > Print > Single-job mode = “Off”.
>
> It's also possible to enter a single “*” for the print quantity. This makes the print quantity “endless”.

Executing firmware files

Files with the extention `.tar` are interpreted as printjobs.

EXPERTS Selecting a firmware file means starting a firmware download. As this is a fundamental intervention to the system, firmware files are not executed immediately.

–

Automatic file execution

If a file named `DEFAULT.FOR` [40] exists on the memory medium in the folder `\FORMATS`, it is executed automatically at system start.

> If a file `\AUTOSTRT.FOR` [41] is also existing in the root directory, it will be executed first. But be aware that standalone print jobs are only executed properly, if the relevant file is stored in the folder `\FORMATS`, as described above.

40 All letters lower case or all upper case; „Default.for“ doesn´t work

41 Not case-sensitive

Disturbances

DISPLAY OF STATUS MESSAGES

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 status report shown on the display is structured as follows:

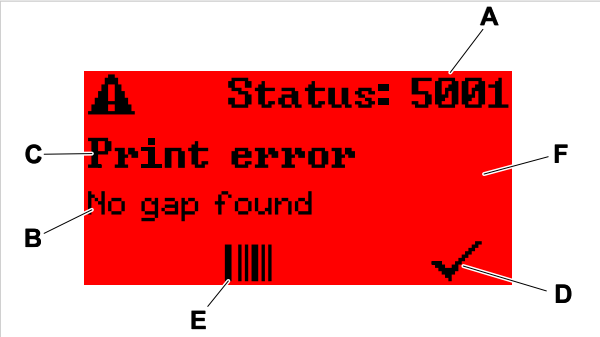


Fig. 52: Example of a status message

A	*Status number* The status number can be used to find a description of the error that occurred in the chapter Reference of status reports on page 95: In the example it is the message 5001 No gap found on page 95.
B	*Status text* Each status number has a status text in the language of the control panel.

TYPES OF STATUS MESSAGES

Error messages

Error messages must be acknowledged by the operator as the triggering event or fault endangers normal operation.

Blocking error messages are messages that occur as a result of serious errors. The message cannot simply be acknowledged by tapping on “Acknowledge”. The error state can only be terminated by a "restart" (press keys 1+2+3) or by switching off the printer.

General software errors

Errors in the firmware can never be completely ruled out. Such errors are described in the error directory as "General software errors". They can only be corrected by the manufacturer.

► Switch the printer off and, after 30 seconds, on again. If the fault repeatedly occurs, please contact our technical service.

Easy Plug errors

Errors in the Easy Plug code can be detected much easier with the following setting:

Printer Language > EasyPlug Setting > EasyPlug errors = “Strict handling”

The Easy Plug command, which caused the error, is displayed after approx. 2 seconds in the lower display line. The displayed text is up to 30 characters long and is scrolled automatically.

If a single character caused the error, this character is marked with “>> <<” in the display text, to facilitate the detection.

By pressing the ⓘ key, the display can be toggled between error message and Easy Plug command text.

Unspecific errors

Some errors can have more than one cause. To be able to find the specific reason for such an error, it is important that it can be reproduced.

► Send the following items of information as complete as possible to the manufacturer – preferably as files:

- Layout and/or print job, which makes the status message appear
- Parameter configuration of the printer, when the error occurs
- Log file of the print job until the error occurs

► Use parameter Tools > Diagnostic > Store Parameters, to save the current parameter configuration.

► Use parameter Tools > Diagnostic > EasyPlug Monitor, to send the received Easy Plug data to a serial interface. Alternatively, with some printer types, log files of the print job can be saved on an external memory medium (Tools > Diagnostic > EasyPl. file log).

Our Technical Support will try hard to find a solution by reproducing the situation which caused the error.

Not listed status reports

EXPERTS The messages not listed in the following reference concern malfunctions that cannot be rectified by the operating personnel.

► Call a service technician.

ACCESS TROUBLESHOOTING INSTRUCTIONS WITH YOUR SMARTPHONE

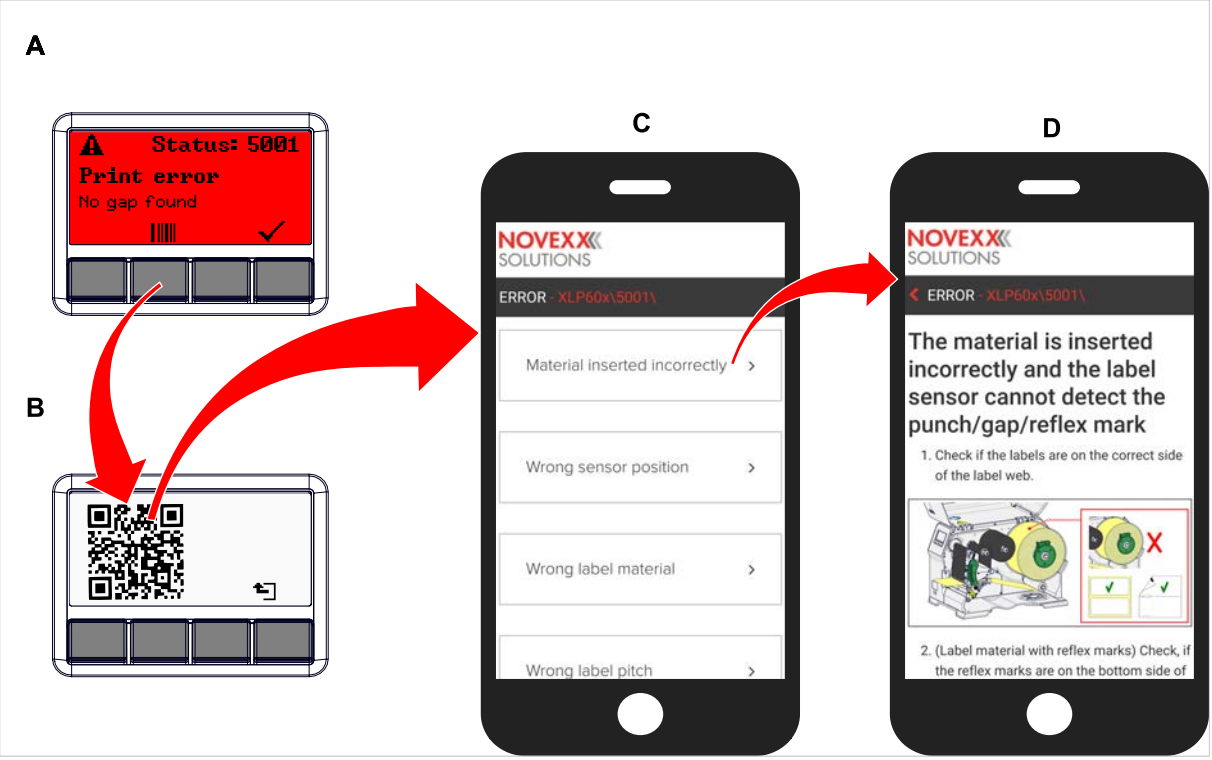


Fig. 53: If the error message has a barcode symbol (A), a QR code (B) can be used to call up troubleshooting instructions (C) on the smartphone.

> This function is currently only available for the most important error messages relevant to the machine operator. Further descriptions will follow with future firmware versions.

Procedure

1. Press the key below the barcode symbol. (A).
   A QR code is displayed. (B).
2. Scan the QR code with the smartphone.
   A webpage with one or more troubleshooting instructions appears on your phone (C).

   > If several error solutions are displayed, they are sorted by relevance, i.e. the solution for the most probable error is at the top.
   >
   > For the time being, only English texts are displayed. Future firmware versions will also support other languages.

3. Touch one of the fault solutions.
   A troubleshooting guide is displayed.

REFERENCE OF STATUS REPORTS

5001 No gap found

No gap found or several blank labels fed.

Illustrated description for troubleshooting:
Click here or scan the QR code:

The error can have several causes:

Cause	Measure
Label sensor at the wrong position.	► Setting the position of the label light barrier correctly (refer to user manual, chap. „Operation“ > „Setting and Monitoring“ > „Positioning the label sensor“).
Unsuitable material inserted. No punch available or recognizable.	► Use punched or die cut label material.
Material incorrectly inserted. Punch on the wrong side.	► Insert material the right way round.
Wrong label length set.	EXPERTS ► Checking the punch definition in the print job (Easy Plug: #IM). ► Checking the label length setting in the parameter menu (Print > Material > Label > Material type)
Label sensor is dirty.	► Cleaning the label sensor.
Ribbon inserted incorrectly. Ribbon runs under the label light barrier.	► Insert ribbon correctly.
Label sensor is not sensitive enough.	EXPERTS ► Check the sensitivity setting of the label sensor.
Label sensor is defective.	EXPERTS ► Replacing the label sensor.

After acknowledgement with key 4, the material is automatically advanced and the next punch is searched for.

5008 Ribbon end

The ribbon unwinding mandrel no longer rotates. This can have various causes:

Illustrated description for troubleshooting:
Click here or scan the QR code:

Possible causes	Solution
Ribbon roll is used up.	► Insert new ribbon roll.
Ribbon was inserted incorrectly.	► Remove the ribbon completely and insert it according to the winding diagram. The ink side of the ribbon must be on the label side, not on the print head side. If the ribbon was inserted the wrong way round: ► Clean the print head before reloading the ribbon.
Ribbon roll is loosely seated on the unwinding mandrel.	► Check that the core of the ribbon roll has the correct inner diameter. If not, use another ribbon roll with a suitable diameter. ► Check that the core of the ribbon roll is seated on the ribbon mandrel without slipping. If not: EXPERTS ► Adjust the spring plates on the ribbon unwinding mandrel so that the ribbon core is firmly seated. EXPERTS ► (Alternatively) Replace the ribbon core adapters.
Ribbon sticks to the print head.	**1.** Remove the ribbon. **2.** Clean the print head. **3.** Insert the ribbon newly.
Ribbon is torn.	► Insert the ribbon newly.

5110 Ribbon low

The diameter of the ribbon roll fell below the set warning diameter (see System > Print Control > Ribbon end warn.).

The message is triggered by the occurrence of a ribbon warning if the following setting is active at the same time: System > Print Control > Ribbon warn stop = “On”.

► Acknowledge by pressing the ✓ key, then press the ▶ key to continue printing.

6033 Print Head not supp.

(Print head is not supported)

9028 System Exception

General software error

► Please read the notes in section General software errors on page 92.

Cleaning

CLEANING INSTRUCTIONS

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 off the machine before cleaning or maintenance and pull out the mains power connecting line!

► 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!

► 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 any scouring cleaning agents or any cleaning agents that could dissolve plastic!

► Do not use acid or alkaline solutions!

Part to be cleaned	Cleaning agent	Article no.
Print head	Cleaning pen	95327
	Methylated spirit, isopropyl alcohol, white gas for cleaning purposes	--
Rubber rollers (print roller, draw roller, ...)	Roller cleaner (Recommended product: Roller cleaner from TGW, available online at https://www.typ-tgw.com/reinigungsprodukte/)	--
Deflection rollers	Methylated spirit, isopropyl alcohol, white gas for cleaning purposes	--
	Label release spray	A103198
Housing	Standard commercial neutral cleaning agent, methylated spirit, isopropyl alcohol	--
Conveyor belt	Isopropyl alcohol	--

Table 17: Recommended cleaning agents

Cleaning interval

► Clean machine regularly.

The frequency depends on the following factors:

- Operating conditions
- Daily operating duration
- Label material/ribbon combination used

General cleaning

Dust particles are especially likely to accumulate in the area of the print mechanics.

► Remove dust particles with a soft brush or a vacuum cleaner.

► Clean the housing with a cloth and a standard commercial neutral cleaner.

CLEANING THE PRINT HEAD

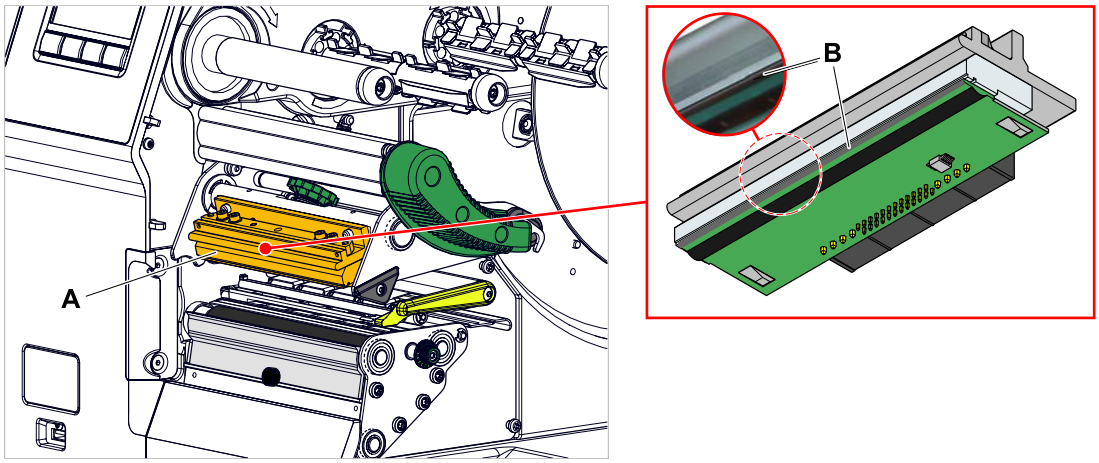


Fig. 54: **A**: Print head, **B**: Thermal strip at the print head

WARNING!

Burn hazard. The print head becomes hot during operation.

► Allow print head to cool before touching.

► Be careful whenever touching the print head.

CAUTION!

Possible damage to the print head due to electrostatic discharge or contact with sharp edges.

► Always protect the print head against electrostatic discharge when performing maintenance and cleaning work! Use ESD protective equipment!

► Never touch the thermal strip with bare hands!

► Never contact the thermal strip with sharp objects!

If no professional ESD protective equipment (ESD wristband, ESD shoes, ...) is available:

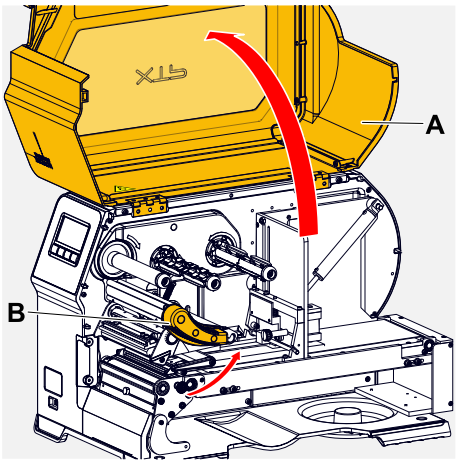
► Discharge your own body before touching the print head, e.g. by touching an earthed object (e.g. radiator) in your vicinity!

Procedure

Removing the print head:

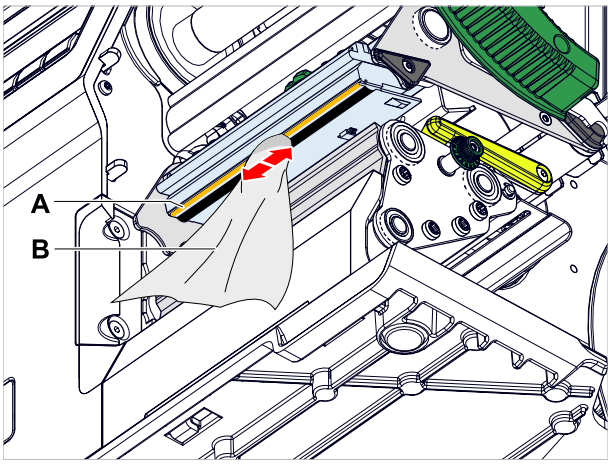
1. Switch off the machine.

2. Open the front hood (A, figure below).



3. Open the print head pressure lever (B, figure above).
4. (Optional) Loosen the ribbon web and push it aside at the print head.
5. Moisten a lint-free cloth with cleaning agent and wipe off the thermo strip (A, B).

‖ For suitable cleaning agents, see table in chapter “Cleaning Instructions”. ‖



6. (Alternative) Wipe the thermo strip with a cleaning pen.

Related reference

Cleaning Instructions on page 97

CLEANING THE PRINT ROLLER

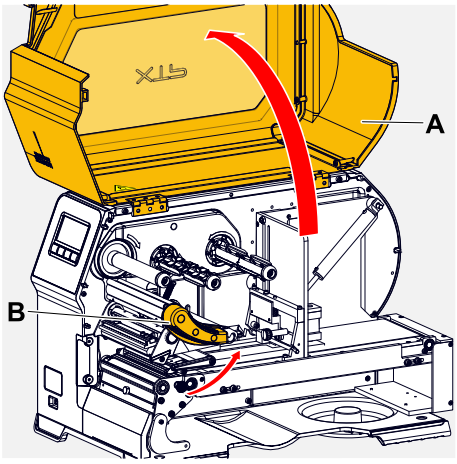
> CAUTION!
> Risk of damaging the roller.
> ► Never use knives or sharp-edged objects to clean the rollers!

It is recommended to remove the roller completely for cleaning. This can be done easily and without tools using the bayonet coupling.

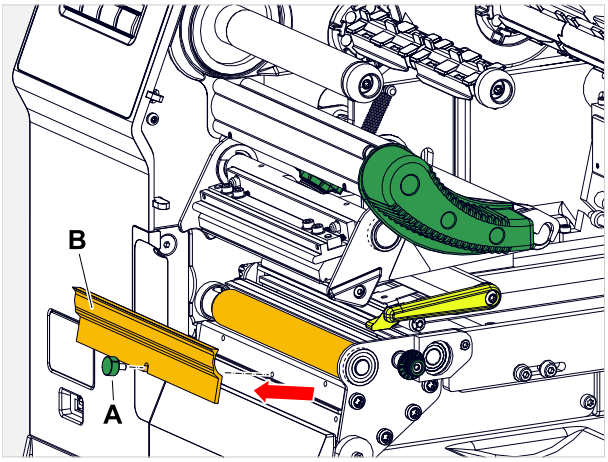
An alternative is to turn the roller by hand while it is installed, cleaning it step by step.

Procedure

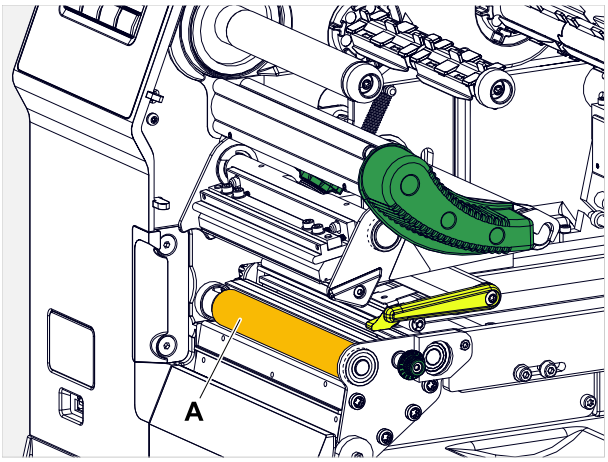
1. Switch off the machine.
2. Open the front hood (A, figure below).



3. Open the print head pressure lever (B, figure above).
4. Remove the tear-off edge (B) (if present). To do this, loosen the knurled screw (A):



5. Remove the print roller (A) (see chapter “Maintenance” > “Replacing the print roller”).



6. Moisten a dust-free cloth with roller cleaner and wipe the roller.
7. Reinstall the roller.

CLEANING THE RIBBON PATH

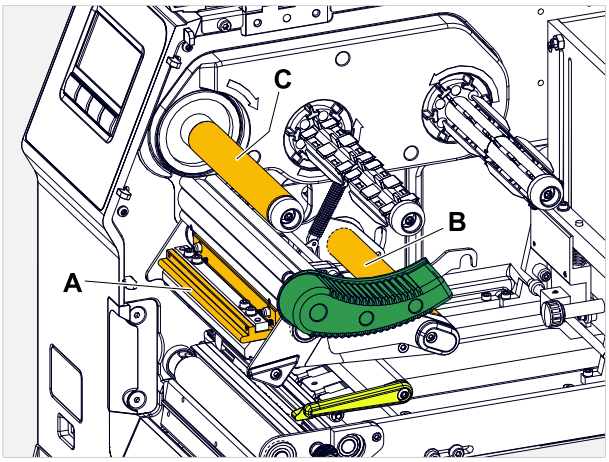


Fig. 55: Ribbon deflections at a XTP 60x (**A**: Print head nose, **B**: Axle, **C**: metal or rubber roller).

Wax/resin residues settle on the thermal transfer ribbon deflectors over time and must be removed.

Procedure

1. Moisten a cloth with methylated spirit and wipe the metal deflectors with it.
2. (Optional) Moisten a cloth with roller cleaner and wipe the ribbon roller (C) with it.

> If the printer is equipped with the ribbon saving function, the ribbon roller (picture above, C) is made of rubber.

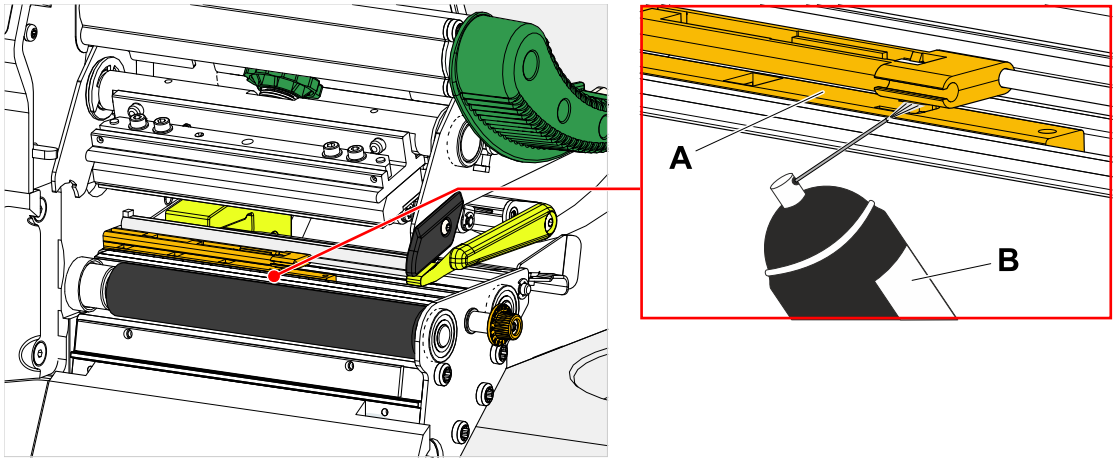
CLEANING THE LABEL SENSOR

Procedure

Cleaning for light soiling:

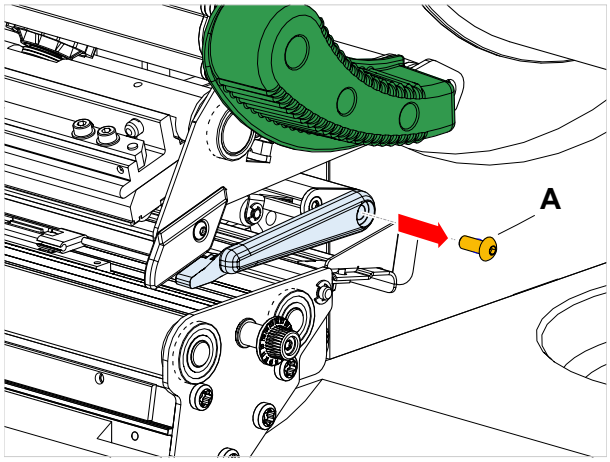
1. Open the front hood.
2. Open the print head pressure lever.
3. Remove the label web from the print module.
4. (Optional) Loosen the ribbon web and push it aside at the print head.
5. Blow out the gap in the sensor fork (A) with compressed air.

   ‖ The sensor is located at the end of the sensor fork. ‖

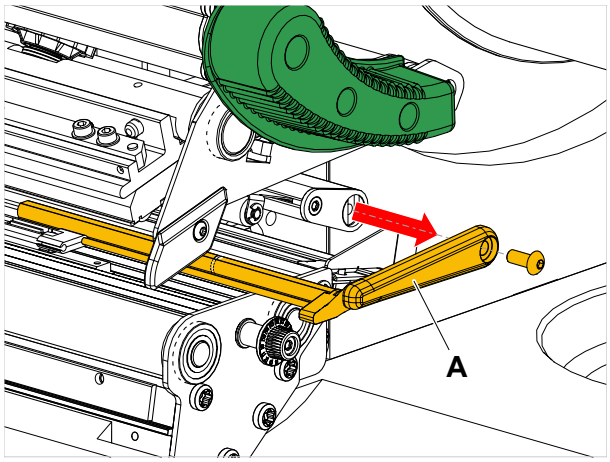


Cleaning for heavy soiling:

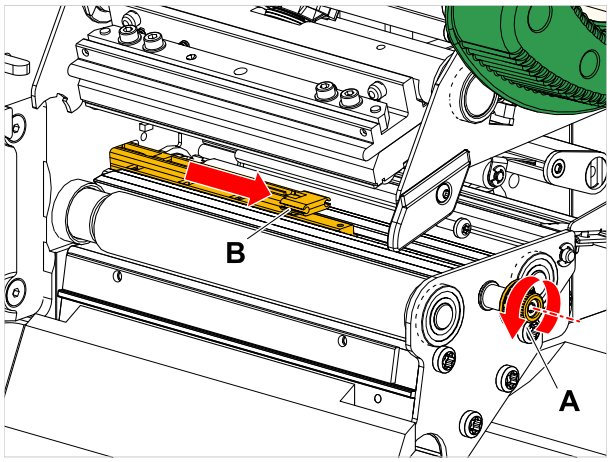
6. Unscrew screw (A).



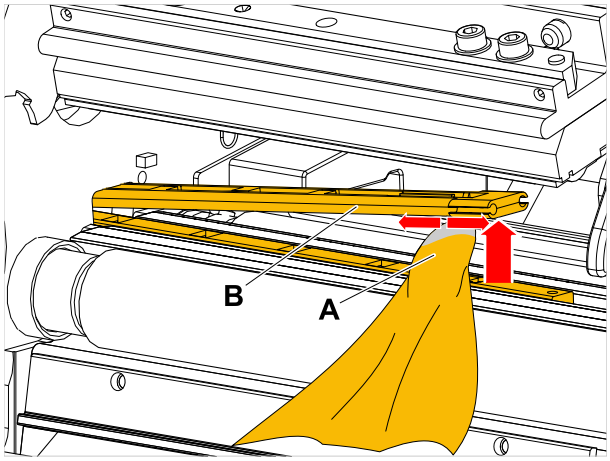
7. Pull out guiding profile (A).



8. Move the light barrier fork (B) all the way out by turning the setting knob (A).

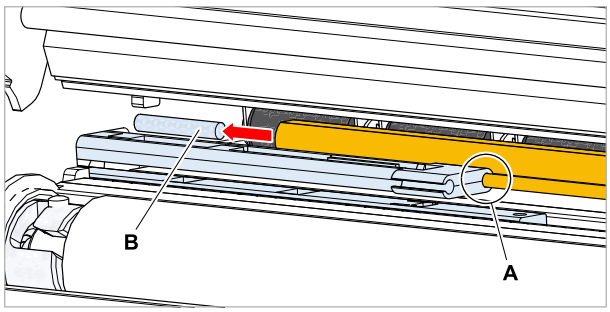


9. Carefully lift the upper part of the light barrier fork (B).

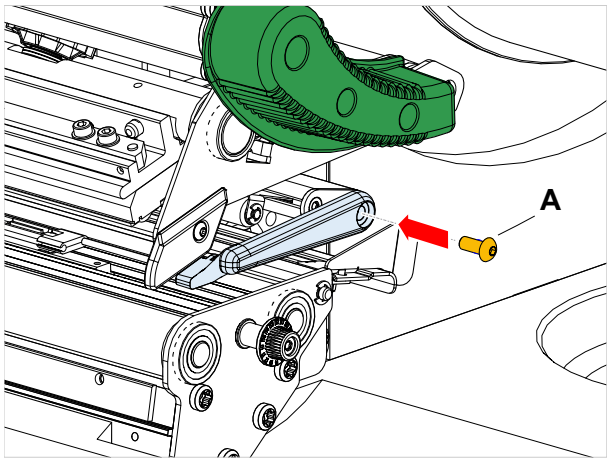


10. Moisten a cloth or cotton swab with methylated spirit (A, figure above) and wipe it over the light barrier at the end of the light barrier fork.

11. When assembling, push the guide profile through the guide (A) of the light barrier fork again and push the rear end back onto the bolt (B) in the base plate.



12. Screw the plastic part tight again:



Maintenance

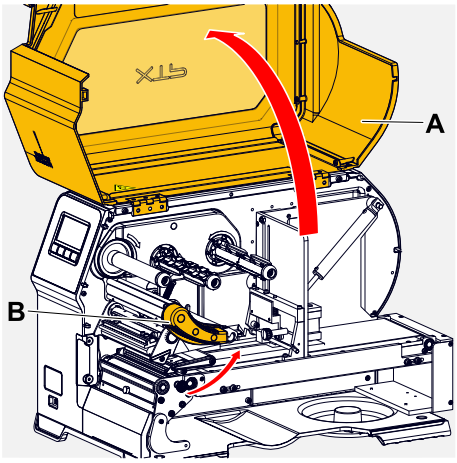
REPLACING THE PRINT ROLLER

The print roller is held in place by a bayonet coupling and can be replaced without any tool.

Procedure

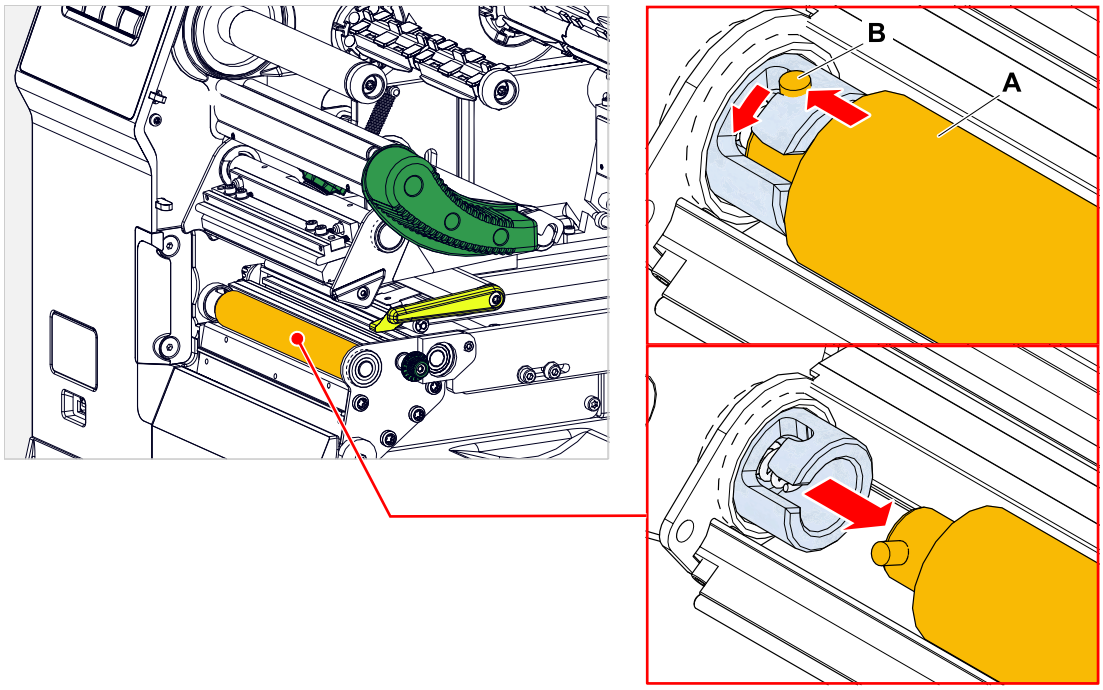
Removing a roller:

1. Switch off the machine.
2. Open the front hood (A).



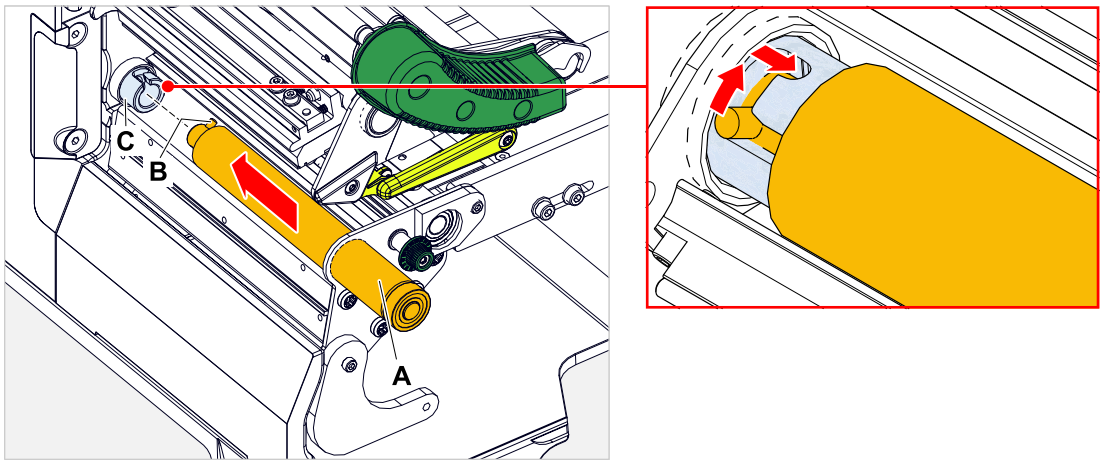
3. Open the print head pressure lever (B, figure above).
4. (Optional) Remove the label web from the print module.

5. Press the print roller (A) firmly in up to the stop, then turn it to the left and pull it out.



Installing:

6. Push the roller (A) through the external bearing plate.



7. Turn the roller so that the steel pin (B, figure above) at its end engages in the opening (C) of the bayonet coupling.
8. Push the roller firmly in up to the stop, then turn it to the right up to the stop.

PRINT HEAD REPLACEMENT

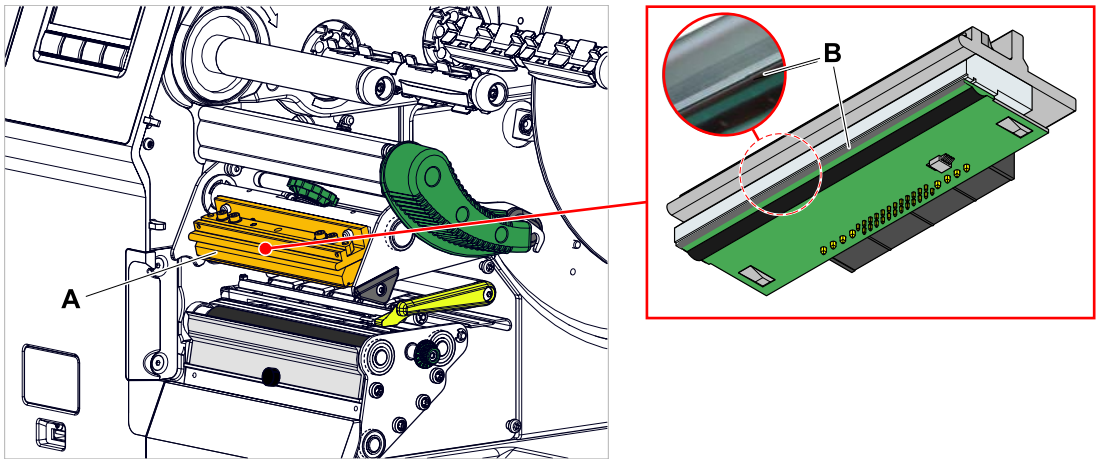


Fig. 56: **A**: Print head, **B**: Thermal strip at the print head

WARNING!
Burn hazard. The print head becomes hot during operation.
► Allow print head to cool before touching.
► Be careful whenever touching the print head.

CAUTION!
Possible damage to the print head due to electrostatic discharge or contact with sharp edges.
► Switch off the machine at its main switch before replacing the print head!
► Always protect the print head against electrostatic discharge when performing maintenance and cleaning work! Use ESD protective equipment!
► Never touch the thermal strip with bare hands!
► Never contact the thermal strip with sharp objects!

If no professional ESD protective equipment (ESD wristband, ESD shoes, ...) is available:

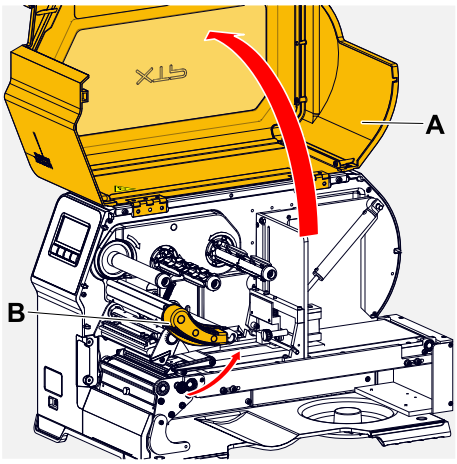
► Discharge your own body before touching the print head, e.g. by touching an earthed object (e.g. radiator) in your vicinity.

Procedure

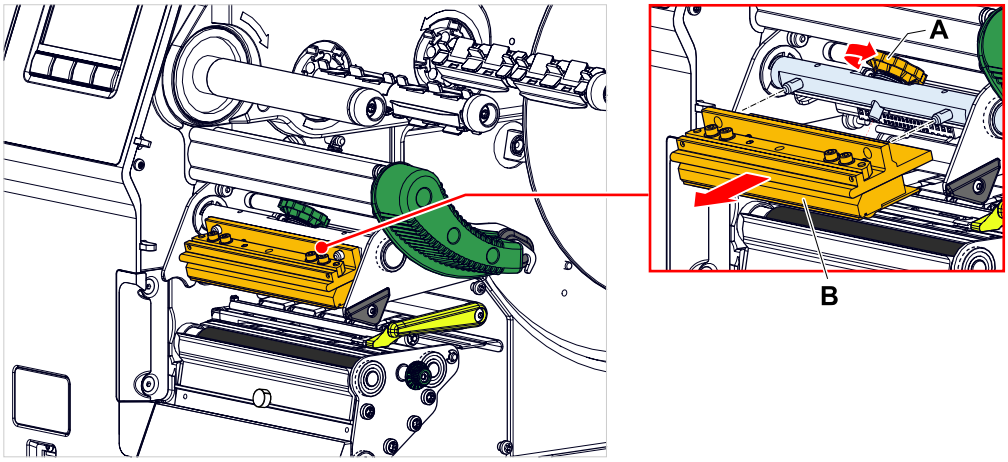
Removing the print head:

1. Switch off the machine.

2. Open the front hood (A, figure below).

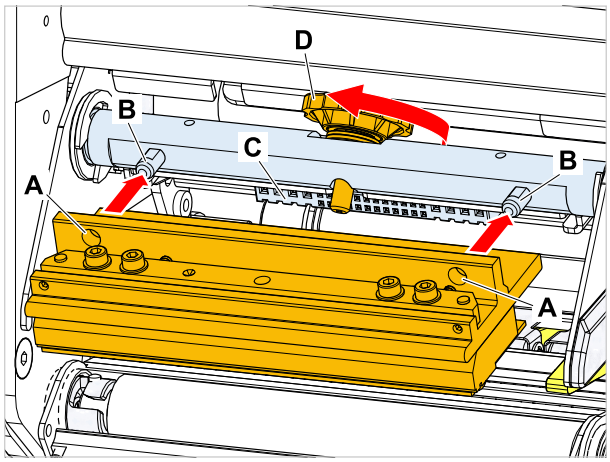


3. Open the print head pressure lever (B, figure above).
4. (Optional) Loosen the ribbon web and push it aside at the print head.
5. Loosen thumb screw (A) and pull print head (B) forward.



Installing the print head:

6. Position the new print head with the holes (A) on the bolts (B). Carefully press the print head with the plug contacts on the rear side into the connector (C).



7. Tighten thumb screw (D, figure above).

What to do next

It is not necessary to adjust the print head resistance or the print head width because the print head is equipped with a memory chip on which all data relevant for operation is stored.

This stored print head data enables the machine control system to determine whether it is the correct print head type. If this is not the case, the following error message appears:

```
6033
Print Head not supp.
```

If no print head or a defective print head is installed, the following error message appears:

```
6034
P. Head missing or defect
```

Appendix

EU DECLARATION OF CONFORMITY

(Translation of original version)

We,

Novexx Solutions GmbH
Ohmstraße 3
D-85386 Eching
Germany

hereby declare that we have designed and built the machine designated below so that it is in conformity with the basic safety and health protection requirements of the directive named below:

Models	XLP 604 / XLP 605 / XLP 606 / XTP 604
General designation	Label Printer
Applicable EU directives	2014/30/EU (EMC) 2006/42/EC (Machinery) 2011/65/EU (RoHS)
Applied harmonized standards, especially	EN ISO 12100:2010 EN IEC 62368-1:2024/A11:2024 EN IEC 61000-6-4:2019 EN IEC 61000-6-2:2019 EN 61000-3-2:2014 EN 61000-3-3:2013
The person authorized to compile technical documents	Novexx Solutions GmbH (for address see above)



Eching, 28.02.2025

Alfredo Sansone
Head of Supply Chain and
Operations and Compliance

APPLIED LICENCES

Open Source Software

This uses open source software. A directory of the used software libraries and licenses is stored in the machine and can be downloaded via web browser.

Enter the following address in the web browser:

`http://<hostname>/licenses.zip`

> <hostname> = Hostname or IP address of the machine
>
> The web server must be activated (Interface > Network > Services > WEB server = “On”).

The file `licenses.zip` contains a number of subdirectories, each named after a used software library. Each subdirectory contains the open source license relevant for the respective software.

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