

USER MANUAL

XLP 504 / XLP 506

Label printer



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Please note

GENERAL NOTES

Validity of this manual and required compliance

Contents

The complete operating manual for the label printers XLP 504 and XLP 506 consists of the following parts:

Manual	Target group	Medium	Availability
Quick reference guide, Safety notes	Operating personnel	Printed	Delivery with the machine
User manual			
Service manual	Service personnel	PDF file	www.novexx.com
Spare parts catalog			

This operating manual refers exclusively to the machine type listed 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 section **Qualifications required** on page 10.

For information about installation and configuration, see the service manual.

For technical questions not covered in this operating manual:

→ Follow the instructions of the service manual

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: 4/2018

Software version: 7.75

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**Abbreviations of printer names**

XLP 50x = XLP 504/XLP 506 (description counts for both printer types)

Text sections, which only count for one of the two printer types, are preceded by the printer name in brackets.

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!

▮→ Special note for action that must be performed.

- ☹ Explanation of an error cause in the reference of error messages.
 - Enumeration of features
 - Other feature



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



The information symbol identifies notes and recommendations as well as additional information.

Notes about hazards and risks

Important instructions that must absolutely be followed are specially highlighted:

**WARNING!**

A warning symbol refers 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!

A caution symbol refers 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 these illustrations are shown in [square brackets] containing the number of the illustrations. Uppercase letters after an illustration number, for example [12A], refer to the corresponding item within the illustration.

Normally the machine is shown as the right version. The left version is only shown if there is a need to make a distinction.


Parameters

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

FOR YOUR SAFETY

Intended use

The label printers XLP 504 and XLP 506 are designed for printing label material, using the thermal or thermal transfer printing process. In addition, the dispenser version of the XLP 50x can dispense self-adhesive labels and can rewind the remaining backing paper (or alternatively the complete label material). It is possible to use a wide range of label materials and thermal transfer ribbons. Label stock must be in roll shape or fan-folded. The label web can optionally be pulled-in from outside the printer through the slots in the rear side or bottom plate.

Observe the technical specifications of the printer, see **Technical data**  on page 26. Any other type of or more extensive application will be considered *abnormal use*.

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

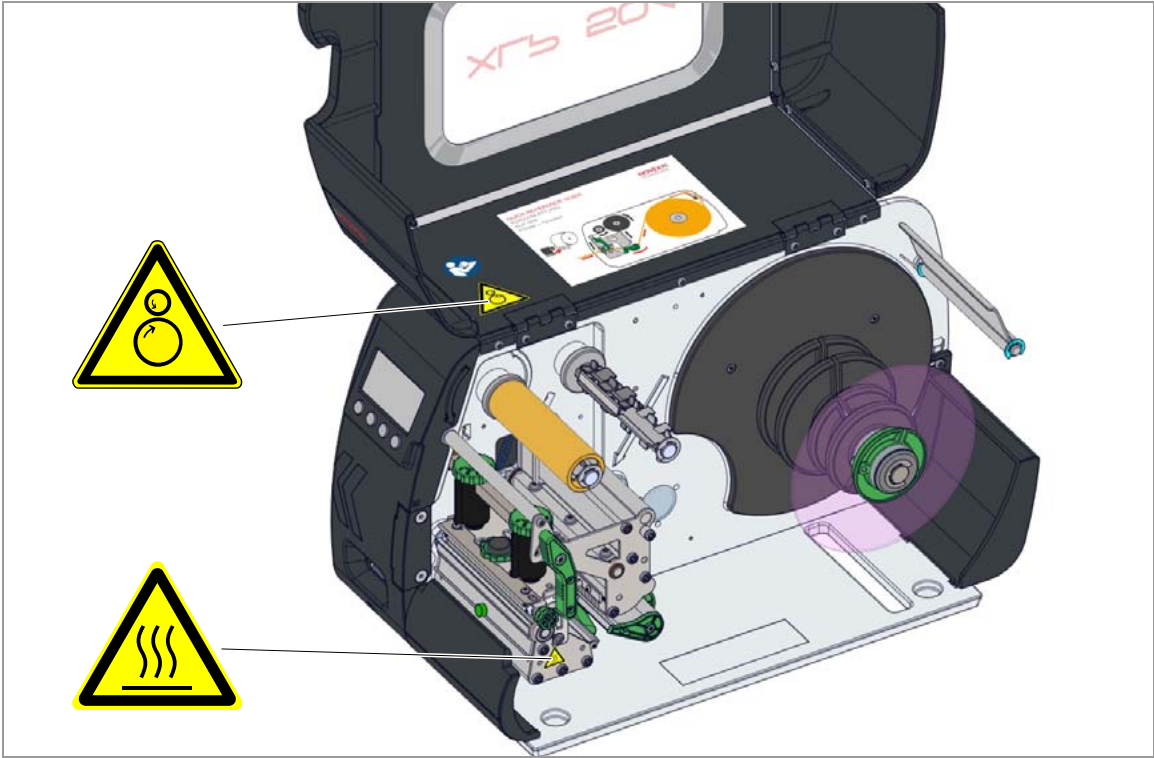
- Only operate the printer using the system voltage indicated on the nameplate!
- Only connect the printer to a grounded power socket fitted to authorized standards!
- Connect only devices to the interfaces at the printer that fulfil SELV (safety extra-low voltage) circuit requirements according to EN 60950!

Protection against injuries by mechanical action




- Only operate the printer when the cover is closed!
- Don't wear loose long hair (if necessary, wear a hairnet).
- Keep loose jewellery, long sleeves, etc. away from rotating parts of the printer!

Warning notes on the machine

- CAUTION!
- Warning notes on the printer provide important information for the operating personnel.
- Do not remove warning notes.
- Replace missing or illegible warning notes.



[1] Warning notes on the XLP 504.

Warning note	Meaning	Article no.
	The 'Pinch point' warning note warns you of the danger posed by the machine's rotating parts; they can trap items and draw them in.	A5346
	The "Hot surface" symbol warns of a burn hazard if the surface is touched. Allow the device to cool off before touching it.	A5640
	The blue label 'Read manual' demands that operators read the user manual.	A5331


[Tab. 1] Meaning of the warning notes.

Product description

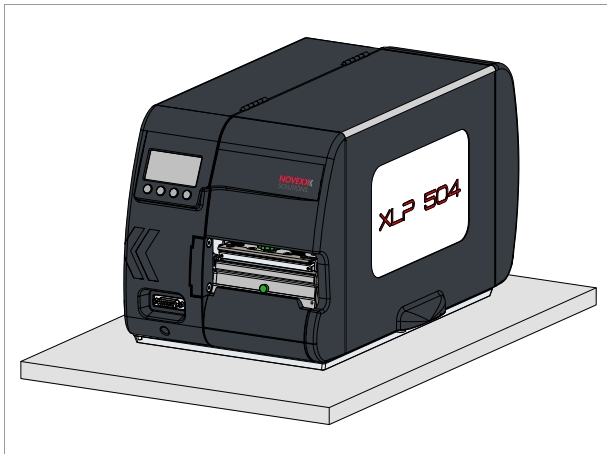
OVERVIEW

Intended use

The label printers XLP 504 and XLP 506 are designed for printing label material, using the thermal or thermal transfer printing process. In addition, the dispenser version of the two printers can dispense self-adhesive labels and can rewind the remaining backing paper (or alternatively the complete label material). It is possible to use a wide range of label materials and thermal transfer ribbons. Label stock must be in roll shape or fan-folded. The label web can optionally be pulled-in from outside the printer through the slots in the rear side or bottom plate.

Observe the technical specifications of the printer, see **Technical data**  on page 26. Any other type of or more extensive application will be considered *abnormal use*.

Intended use position: The XLP 50x is a tabletop printer. The intended use position is standing as illustrated [2] on top of a solid surface, e. g. a table.

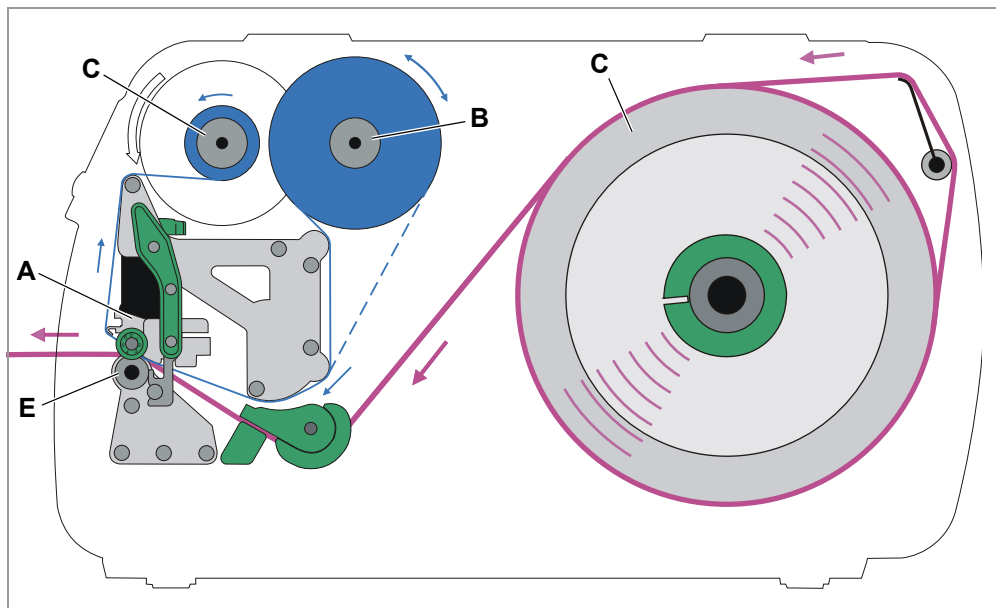


[2] Intended use position of the XLP 50x on top of a solid surface.

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

Functionality

XLP 504/XLP 506 without dispenser



[3] Material and foil path inside the XLP 504/XLP 506.

- A Printhead
- B Foil unwind mandrel
- C Foil rewind mandrel
- D Material unwinder
- E Print roller

The printing principle is based on the thermal printhead [3A]. The core piece of the printhead, 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 thermo printing, the black dot results from the reaction of the thermosensitive label material. With thermo transfer printing, the black colour is transferred from the thermotransfer foil 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 [3E], which is motor driven. By moving the label material, it is unwound from the label roll [3C].

When using thermotransfer printing, the thermotransfer foil is fed together with the label material underneath the printhead. The foil position is between label material and printhead, the colour side facing the label material. The full foil roll is plugged on the foil unwinder [3B]. After passing the print-head, the used foil is wound onto the foil rewinder [3C], which is motor driven. If the foil roll is completely rewound, a new roll has to be inserted.

Material end and foil 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 with punched label material and by a reflex sensor (option) with endless material.

XLP 50x dispenser

The dispenser version of the printer allows freshly printed labels to be dispensed or rewound in the printer enclosure.

- When used as a *dispenser*, the label material is drawn around the dispensing edge and only the backing paper is rewound (Prerequisites: Dispensing edge + Rewinder).
- When used as a *rewinder*, the printed label is guided across a baffle plate and rewound together with the backing paper (Prerequisites: Baffle plate + Rewinder).

The electronic components in the rewinder control the tensile force on the release paper so that the same force is applied for all winding diameters. This is controlled independently of the material width and printing speed. The controller can be set automatically or manually depending on the settings in the parameter menu.

■► The manual setting is only necessary in special cases and may only be performed by qualified, authorised service personnel.

After switching on the printer, the rewinder is initialised and the backing paper is tightened.

Once a print job is received, the printer searches for the first label start marking at reduced printing speed. To do this, the label material is moved by at least the distance between the label sensor and the printhead (70 mm). This distance is used by the rewinder controller to calculate the diameter of the previously wound backing paper. To allow the controller to calculate the diameter even with endless material, in this case printing also does not start until the material has moved 70 mm. The print job is carried out at the speed that has been set in the parameter menu or as specified by the print job.

If a fault occurs during operation, the rewinder shuts off automatically.

Once the maximum diameter of the backing paper has been reached, a message appears on the display and the rewinder shuts off automatically.

The following operating modes are available for the dispenser:

- *Dispenser mode with dispenser sensor:*

The material feed ends at the dispensing edge, i.e., the label to be dispensed remains hanging on the dispensing edge (set dispensing position). The printer waits until the label is removed before moving the next empty label beneath the printhead and then printing and dispensing it.

- *Dispenser mode with foot switch:*

Pressing the foot switch releases the label for printing and dispensing. Afterwards, the next empty label is positioned beneath the printhead.

Device types

The XLP 50x is available in the following versions:

Basic

Printer equipped with serial, USB and Ethernet interface and SD card slot. Possible upgrade to „peripheral“ version.

The following options can be integrated:

- Reflex sensor (bottom side)
- I/O board (signal interface and additional serial interface)

Peripheral

Like the „basic“ version, but with capability to add the following options:

- External rewinder
- Cutter

Options

Internal Options

...should be factory-fitted or installed by a service engineer:

- *Internal rewinder kit*: To retrofit the internal rewinder
- *Internal rewinder + dispenser kit*: To retrofit the internal rewinder and the dispensing edge
- *Reflex sensor kit*: Light barrier fitting that apart from the transmission sensor, also contains a reflex sensor (detects reflex marks on the material bottom side).
- (XLP 504) *Label sensor for short labels*. Recommended for label length < 30 mm.
- *I/O board*: RS-422/485 interface, signal interface

External Options

...do not require any special alterations to the printer:

- *Cutter* (prerequisite: printer version „peripheral“)
- *(External) rewinder* for material rolls with 38 mm (1.5”), 75 mm (3”) or 100 mm (4”) cores (prerequisite: printer version „peripheral“)
- *Keyboard* for comfortable data input in standalone mode
- *Foot switch* for foot-operated single label dispensing
- *Dispensing edge* (prerequisite: Internal rewinder installed)
- *Applicator LTSA* (for XLP 504 only, requires special preparation of the printer, see operating manual LTSA)
- *Cutter-Stacker TCS* (for XLP 504 only, requires special preparation of the printer, see operating manual TCS)

Ports and connections



WARNING!

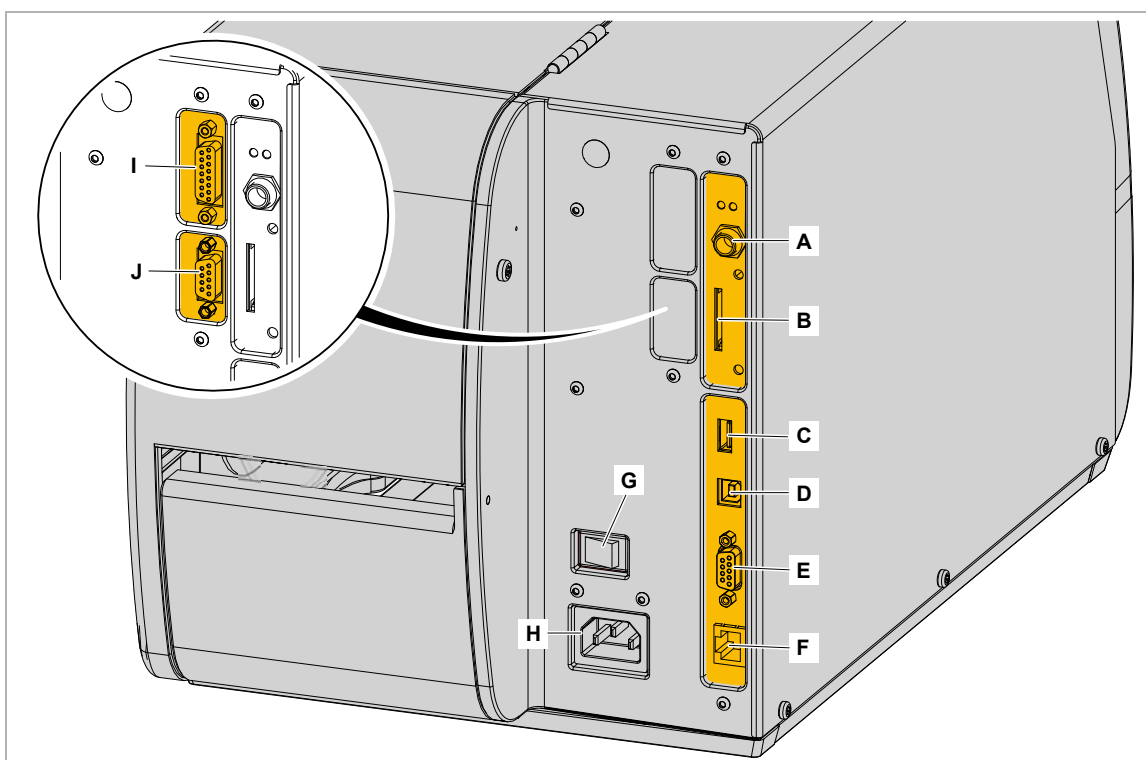
This unit operates at mains voltage! Contacting electrically live components can cause potentially lethal electrical shocks and burns.

→ Only connect the printer to devices that fulfill the SELV (safety extra-low voltage) circuit requirements in accordance with EN 60950.

CAUTION!

Using poor quality auxiliary equipment can damage the printer.

→ Only connect original accessories.

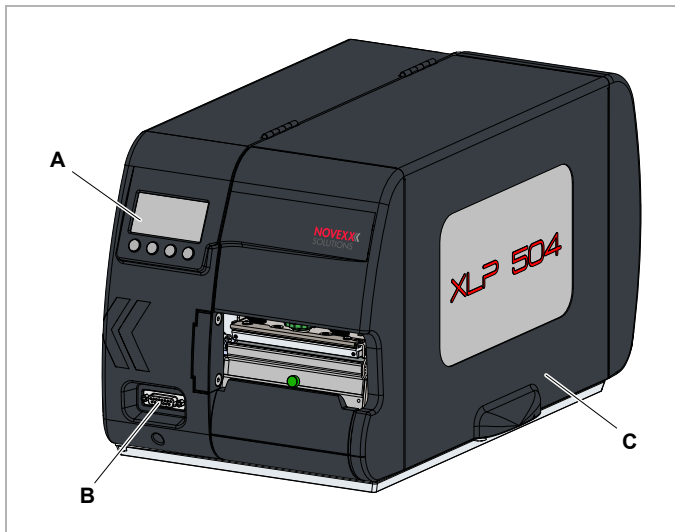


[4] Rear side of the XLP 504 with I/O board (option) installed. The connections at the XLP 506 are identical.

- A** *Start/stop signal input:* Connections for a foot switch (signal starts printer) or stacker (signal stops printer)
- B** *Memory card slot:* For SD cards where you can store fonts, logos, graphics, etc.
- C** *USB port (host):* For USB sticks, keyboards, etc.
- D** *USB port (device):* For serial transfer of printer data
- E** *RS232 port:* For serial transfer of printer data
- F** *Ethernet port:* Interface for "Ethernet 10/100 Base T" network
- G** *Mains power switch:* On/Off switch for printer
- H** *Mains socket:* Mains socket for connection to mains using supplied cable
- I** (Option) *Signal port:* 4 inputs / 3 outputs on optionally available I/O board
- J** (Option) *Serial port:* RS232 or RS422/485 on optionally available I/O board

Operating controls

Operating controls at the XLP 504/XLP 506



[5] Outside view of XLP 504 "peripheral".

A Control panel:

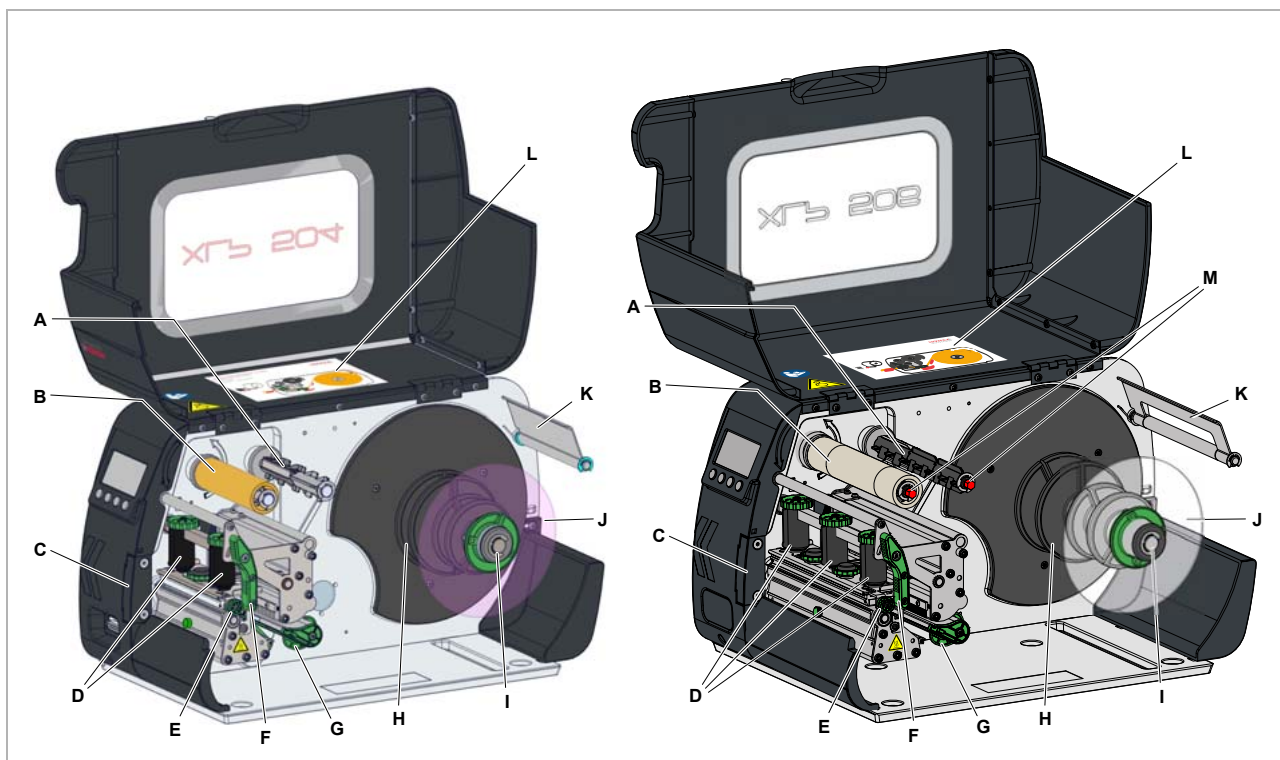
LCD screen; 4 buttons; displays operating status of printer; allows parameter menu settings.

B (Only to version "peripheral") Connection for additional devices:

- Cutter („Cutter 2000“)
- Rewinder („Rewinder 2000“)
- Light barrier on the dispensing edge (Dispensing option)

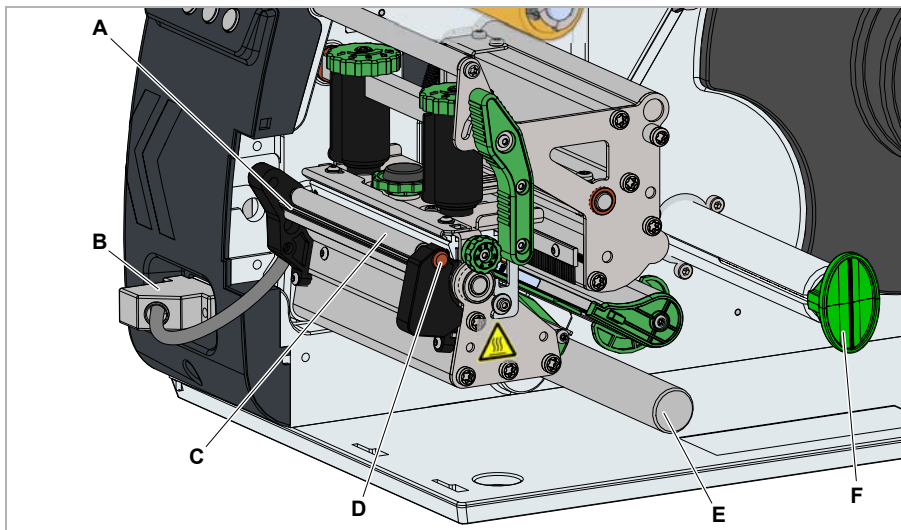
C Front cover:

Open this to insert material and the ribbon.



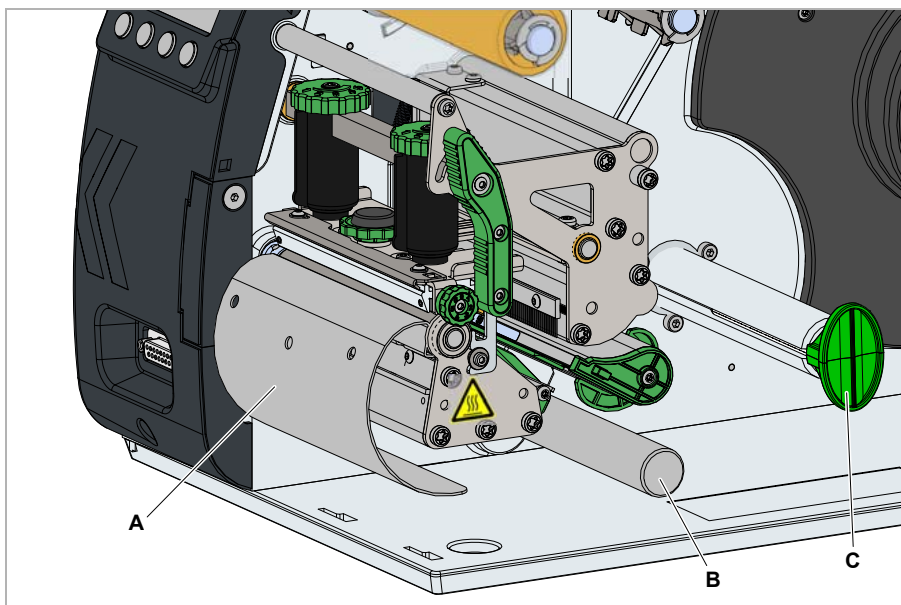
[6] Operating controls of XLP 504 (left) and XLP 506 (right).

- A** *Ribbon unwinding mandrel:* Holds the new ribbon roll
- B** *Ribbon winding mandrel:* Holds the cardboard core that rewinds the spent ribbon
- C** *Connection flange for additional devices:* You can fasten either a cutter or rewinder here. To do this, you first have to remove the plastic cover.
- D** *Pressure elements:* Set the printhead contact pressure by rotating the green dial (see chapter **Printhead contact pressure** □ on page 124).
- E** *Setting dial for printhead support:* When using narrow labeling material, the printhead has to be supported to get a uniform printing result (see chapter **Printhead support for narrow labels** □ on page 125).
- F** *Pressure lever:* Opening the pressure lever lifts the printhead. You do this to insert material/ribbon or to clean the printhead/print roller.
- G** *Material guiding*
- H** *Adapter rings:* For adapting unwinder to core diameter of material roll.
- I** *Material unwinder:* This is where you install the roll with the label material.
- J** *Guiding disk:* Prevents material roll from sliding out sideways.
- K** *Material strain relief:* Allows the label material to unroll evenly.
- L** *Quick reference guide:* Booklet with the most important operating steps, inserted into a pocket in the cover. Insertion diagram on the front page.
- M** (XLP 506) *Adjusting knobs for the ribbon tension.*

Operating controls at the dispenser option

[7] Additional operating controls on XLP 50x dispenser (fig. showing XLP 504).

- A** *Dispensing edge*: This is where the labels are separated from the backing paper.
- B** *Plugs*: Connector for dispensing edge sensor.
- C** *Dispensing roll*: This holds the material ribbon taut over the dispensing edge.
- D** *Button for dispensing roll*: Press the red button to remove the dispensing roll.
- E** *Deflecting shaft*: This deflects the backing paper.
- F** *Rewinder*: This rewinds the backing paper.

Operating controls at the rewinding option

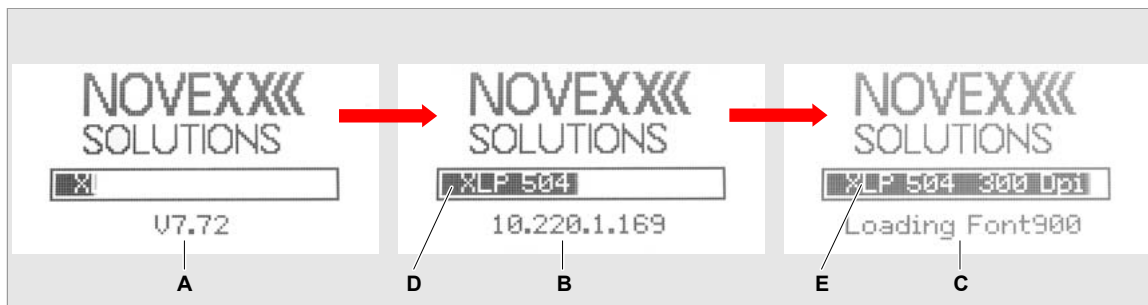
[8] Additional operating controls of XLP 50x with rewinding option (fig. showing XLP 504).

- A** *Baffle plate*: Deflects the printed labels without dispensing any of them.
- B** *Deflecting shaft*: This deflects the labels.
- C** *Rewinder*: Rewinds the label web.

OPERATION PANEL

Display during startup

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

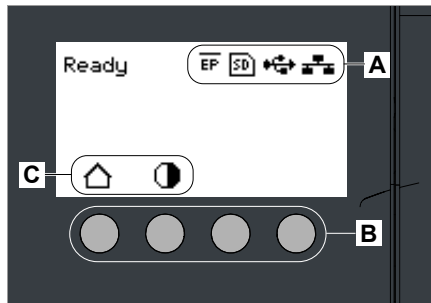


[9] Changing informations on the screen during startup:

- A Firmware version
- B (Optional) IP address (if Ethernet is selected as data interface)
- C (Optional) Font is loaded from external memory medium (if a font is stored there)
- D Progress bar
- E Printer type

Operating controls

The operation panel of the XLP 50x consists of a graphic display and four keys below the display. The current functions of the keys are displayed by icons [10B] above the keys.

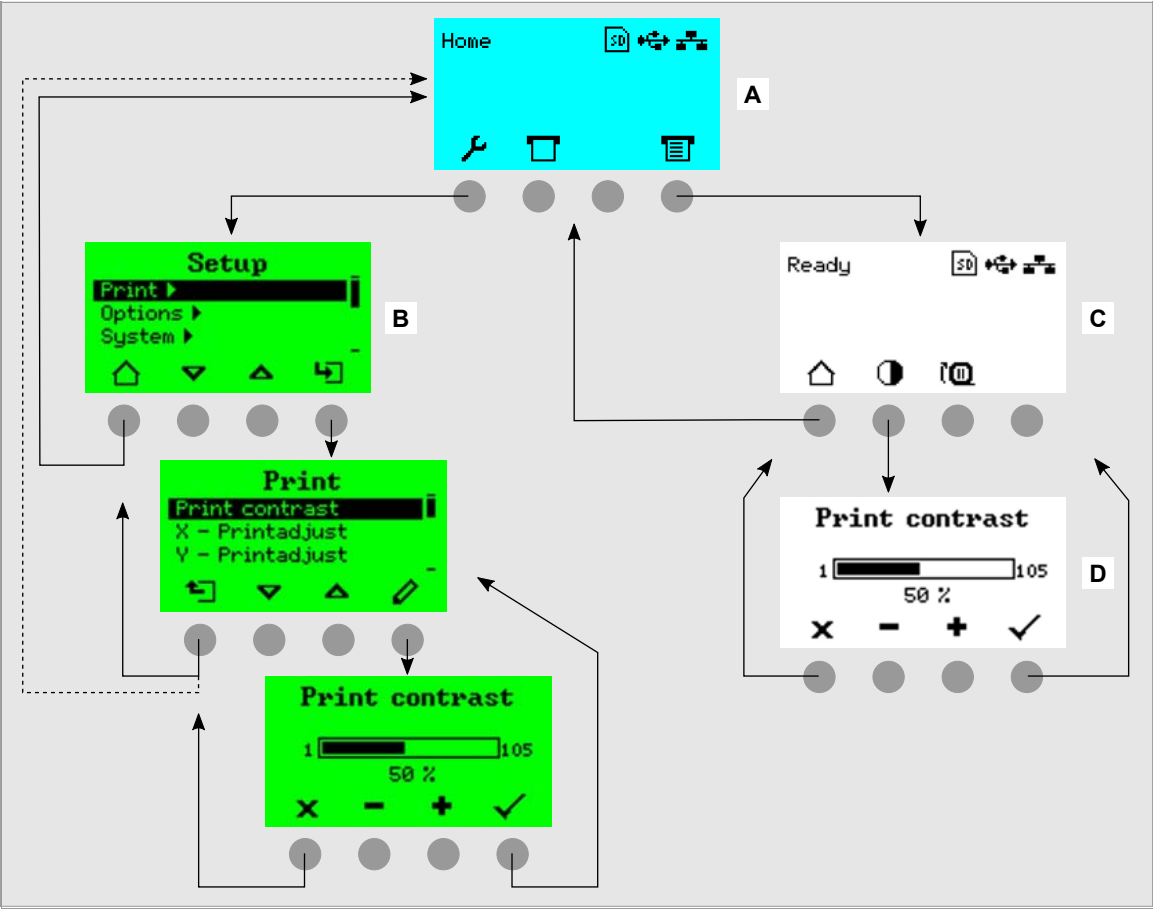


[10] Operation panel of the XLP 50x.

- A Icons that inform about the interface assignment (Tab. 4)
- B Icons that show the key assignment (Tab. 3)
- C Keys

Operating principle

Figure [11] shows, how to toggle between the screens:



[11] How to toggle between the screens

- A „Home“ screen (cyan)
- B „Setting“ screen (green)
- C „Ready“ screen (white)

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	
White	Ready	<ul style="list-style-type: none">• The printer is ready to receive print data• The commands in the received printjob are processed by the interpreter• Errors or warnings can be displayed
	Printing	Same as „Ready“; additionally, the printjobs are printed after the interpreter has processed them
	Waiting for a start signal	Same as „Ready“; additionally, the current printjob is stopped until a start signal is detected (e. g. coming from a foot switch or by pressing the start key in singlestart mode)
	Standalone	<ul style="list-style-type: none">• 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 printjob are displayed

[Tab. 2] Display colors and corresponding states




















Color	State	
Cyan	Home	Generally counts: Cyan => Need for action by the operator <ul style="list-style-type: none"> The printer is <i>not</i> ready to receive print data The interpreter has stopped Error messages or warnings can <i>not</i> be displayed
	Stopped	<ul style="list-style-type: none"> The current printjob was stopped The printer is ready to receive print data The commands in the received printjob are processed by the interpreter Errors or warnings can be displayed
Green	Settings	<ul style="list-style-type: none"> Settings in the parameter menu can be done The printer is <i>not</i> ready to receive print data The interpreter has stopped Error messages or warnings can <i>not</i> be displayed
Red	Error	<ul style="list-style-type: none"> An error occurred during the printing The current printjob is stopped A status message is displayed with red background The status message only disappears after pressing the acknowledgement key The printer is ready to receive print data The commands in the received printjob are processed by the interpreter Further errors can occur and, if so, are queued
Yell.	Warning	Same as „Error“, with the following differences: <ul style="list-style-type: none"> The current printjob is <i>not</i> stopped The warning is displayed with yellow background The warning disappears after some seconds

[Tab. 2] Display colors and corresponding states
















Icons overview

	<i>Home</i> : Toggle to the „Home“ screen		<i>Start</i> : Starting an operation, e. g. printing
	<i>Contrast</i> : Setting the print contrast during printing		<i>Halt</i> : Stopping an operation, e. g. printing
	<i>Printing</i> : Toggle to the „Ready“ screen	1	Keys 1-4: For typing in of key codes, the keys are numbered from left to right
	<i>Cutter</i> : Triggers a cut of the optional cutter („Cutter 2000“) or of the optional cutter-stacker (TCS)	2	
	<i>In</i> : Opening a menu	3	
	<i>Out</i> : Jump to the next higher menu level; Hold the button pressed: jump to the highest menu level	4	

[Tab. 3] Those icons inform about the function of the key below the icon.

	<i>Rewinder start</i> : Starting the internal or external („Rewinder 2000“) rewinder		<i>Cancel</i> : Leaving the dialog without applying the setting
	<i>Rewinder halt</i> : Stopping the internal or external rewinder		<i>Acknowledgement</i> : Acknowledgement, e. g. of an input or an error message
	<i>Left/Right</i> : Move the marker in the text input dialog to the left or right		<i>Up/Down</i> : Move the selection bar upwards or downwards
	<i>Reprint</i> : Triggers the reprint of the preceding label, if the function is activated		<i>Up to first</i> : Moves the bar in the selection list to the first position
	<i>Delete</i> : Deletes the character left of the marker in the text input dialog		<i>Parameter</i> : Call parameter
	<i>Character selection</i> : Selecting a character in the text input dialog		<i>Feed</i> : Trigger material feeding
			<i>Start signal</i> : Input of a start signal by hand in single start mode
	<i>Setting</i> : Toggle to the „Setting“ screen		<i>Info</i> : Call a purely informative menu item
	<i>Right</i> : Move one input field further to the right (when typing in values that consist of several fields, e. g. time)		<i>Plus/Minus</i> : Increase/decrease a value in an input field
	<i>Applicator</i> : Triggers one stroke of the optional applicator (LTSA)		

[Tab. 3] Those icons inform about the function of the key below the icon.



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

[Tab. 4] Those icons inform about printer states.

a) Icon flashes during print data transfer

b) Icon flashes during print interpreter activity

Key combinations

Printer state	Key combination	Function
„Home“ screen	1+3+4	Enter access code, see chapter Access authoriz.  on page 63
	3+4	Measuring the label pitch automatically, see user manual, chapter „Operation“ > „Setting and monitoring the printer“ > „Settings in parameter menu“ > „Label pitch“
	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 141

[Tab. 5] Special key combinations.

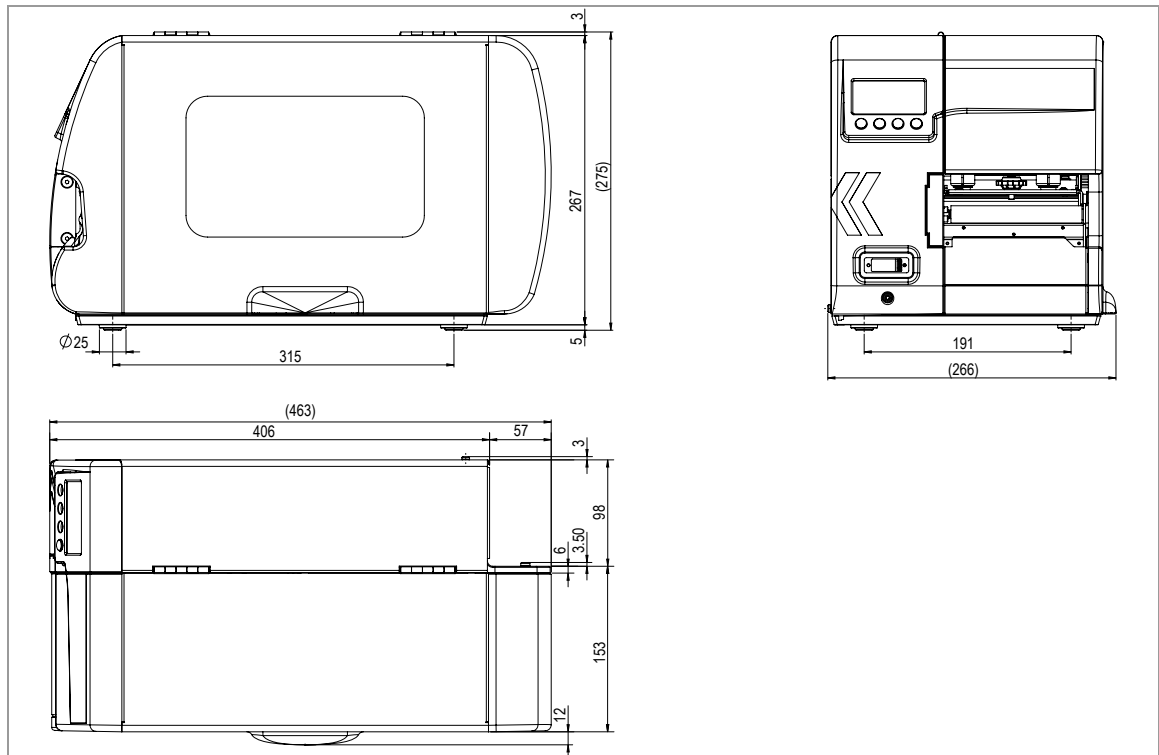
TECHNICAL DATA

Dimensions

Measures

(XLP 504) 275 x 266 x 463 mm (H x W x D)

(XLP 506) 275 x 336 x 463 mm (H x W x D)



[12] Dimensions of the XLP 504 (H=Height, W=Width, D=Depth).

Weight

Printer	Weight
XLP 504 basic / peripheral	14.0 kg
XLP 504 basic dispenser / peripheral dispenser	14.7 kg
XLP 506 basic / peripheral	15.5 kg
XLP 506 basic dispenser / peripheral dispenser	16.5 kg

Performance Data

Print head

- *Print Technology:* Thermodirect and thermotransfer printing
- *Print head Type:* „Flat Head“ Type (ceramic thin film flat head)

• *Print head characteristics:*

Printer	Resolution (Dot/mm)	Resolution (dpi)	Printspeed (mm/s)	Printspeed (inch/s)	Max. printwidth (mm)
XLP 504	8.0	203	50-254	2-10	104
	11.8	300	50-200	2-8	105.7
	23.6	600	50-150	2-6	105.6
XLP 506	8.0	203	50-200	2-8	168
	11.8	300	50-150	2-6	

CAUTION!

Hazard of malfunction of the power supply and restart of the printer (XLP 506).

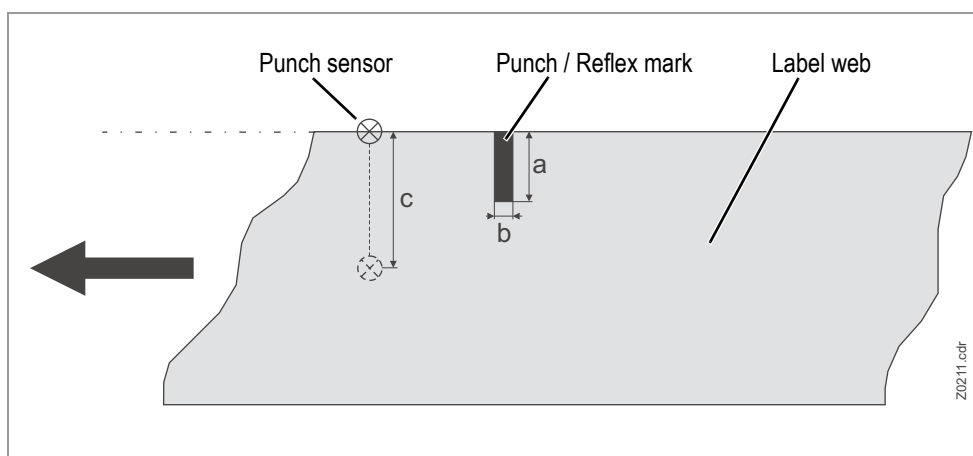
→ Take into account the limitations regarding print contrast and print width, see chapter (XLP 506) **Print width limitations** on page 32.

Label sensor

Sensor type	Setting range (Size c)	Punch length (Size b)	Punch width (Size a)
Transmission sensor (Standard)	0–60 mm	0.8–14 mm	min. 4 mm
Reflex-sensor (optional)	6–66 mm	4 mm (recommended)	12 mm (recommended)

[Tab. 6] Required punch measures.

➡ The dark/light change at the reflex sensor is taken as the *label beginning* (= end of the reflex mark)



[13] Measures and setting range of the punch / reflex mark.

Max. print length

The maximum print length depends on the following:

- Print head resolution
- Firmware version
- Memory allocation (see info printout „Memory Status“)

Zero line

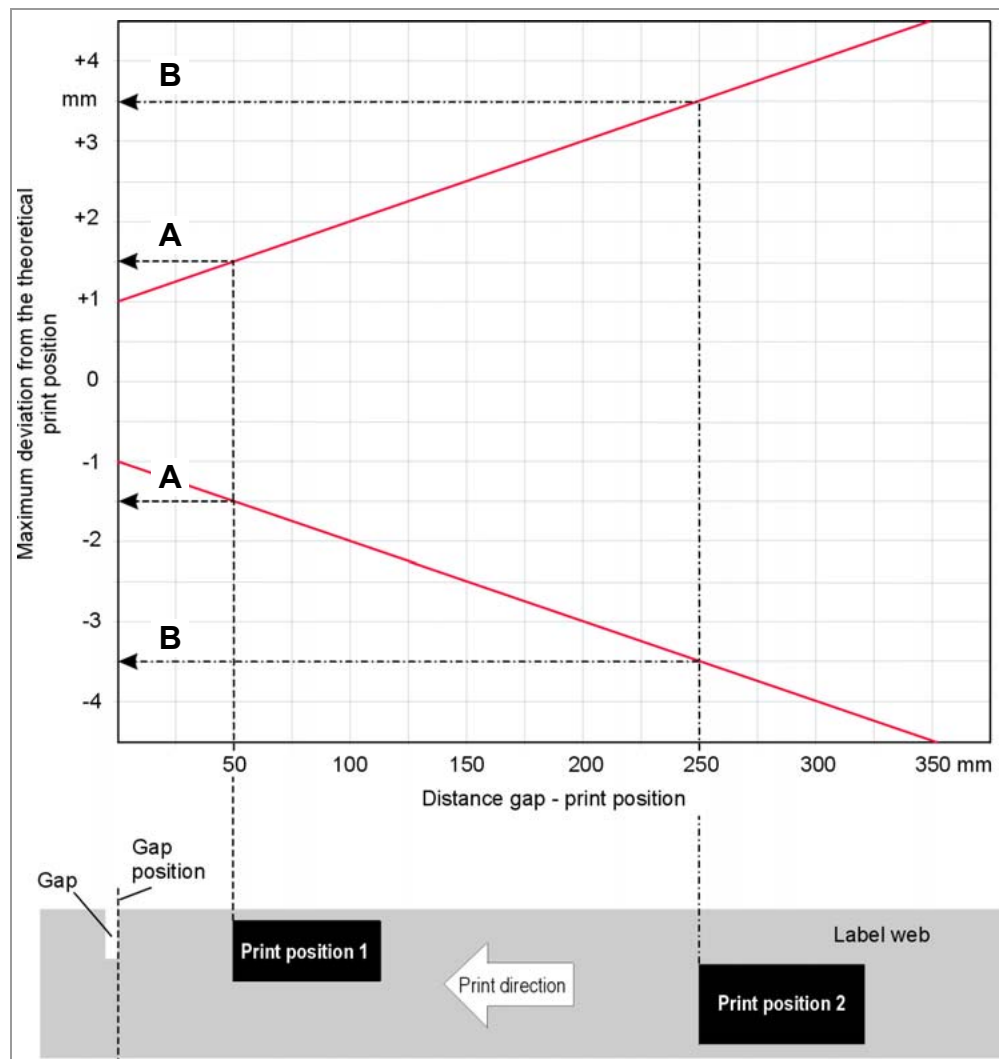
Offset of the material zero line to the print zero line: 1 mm (what means that a stripe of 1 mm width at the inner label margin is unprintable)

Fonts

- 17 Fixsize fonts , including OCR-A and OCR-B
- 3 scalable fonts (Speedo fonts)
- Truetype fonts are supported (also Unicode)
- Optionally can Truetype, Speedo and Fixsize fonts be stored on SD card

Modifying Fonts

- Up to factor 8 scaling in x/y direction
- Rotation by 0, 90, 180 and 270 degrees

Impression accuracy

[14] The impression accuracy depends on the print position on the label: the longer the distance to the gap is, the lower is the impression accuracy. The maximum impression accuracy is at the gap position with +/- 1 mm.

Reading examples:

A: Print position 1 is located 50 mm behind the gap position. The maximum possible deflection from the theoretical print position is +/- 1.5 mm.

B: Print position 1 is located 250 mm behind the gap position. The maximum possible deflection from the theoretical print position is +/- 3.5 mm.

■ Those values are empirical for typical applications with common label stock / foil combinations. Since the deflection of the print position strongly depends on the applied label stock / foil combination, it can turn out higher if unfavorable combinations are used.

Image formats

BMP, PCX, JPEG, TIFF, GIF, Easy Plug logos

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

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

Printer emulation

Easy Plug

Label Stock

Material Types

Thermotransfer material, thermotransfer material, synthetic ribbons: PE, PP, PVC, PA in rolls or fan-folded.

Material Thickness

- *Self-adhesive labels*: 60 - 160 g/m²
- *Cardboard labels*: (XLP 504) max. 240 g/m²; (XLP 506) max. 190 g/m²

Material Width

Printer type	Material width
XLP 504	15 - 120 mm
XLP 504 dispenser	30 - 110 mm ^a
XLP 506	50 - 185 mm
XLP 506 dispenser	50 - 170 mm ^{a)}

[Tab. 7] Overview material width.

- a) The material passage width is limited by the dispensing sensor, which is mounted at the side. If a dispensing edge without a sensor is applied (foot switch operation), the passage width is as large as at the standard printer.

Label Length

Printer	Min. length	Max. length
XLP 50x	5 mm	max. print width ^a
XLP 50x dispenser	30 mm ^b	200 mm
XLP 504 dispenser (With optional label sensor for short labels)	5 mm	200 mm

[Tab. 8] Overview label length.

- a) See **Max. print length**  on page 27.
b) (XLP 504) For label length less than 35 mm, the optional label sensor for short labels is recommended

Gap size

Gap size between the labels on the backing material:

- min.: 1.0 mm
- max.: Label length - 15 mm

Label Roll

- *Winding Direction*: Labels facing inward or outward, internal rewinder: labels facing outwards
- *Roll diameter*:

Roll / Conditions	Roll Ø
Label roll for normal printing operation	max. 210 mm
Label roll for dispensing operation (with 100 mm core-Ø)	max. 190 mm
Take-up roll for winding/dispenser operation	max. 120 mm

[Tab. 9] Diameter of material and winding roll

- *Core diameter*: 38.1 mm (1.5"), 76.2 mm (3") oder 101.6 mm (4"); cores with 76.2 (3") or 101.6 mm (4") can be applied with the core adapter supplied with the printer.

Thermotransfer Ribbon

Ribbon Roll

- *Winding Direction:* Colour-side rolled inwards or outwards
- *Roll dimensions:*

External Ø	max. 80 mm ^a
Core Ø	25 mm (1")
Width ^b	(XLP 504) 25 -110 mm
	(XLP 506) 54 -172 mm

a) Corresponds for example to 450 m standard ribbon type Novexx 4903

b) Generally counts: The thermal transfer ribbon must overlap the label 2 mm on each side.

For labels width > max. print width count the foil width: (XLP 504) 110 mm, (XLP 506) 172 mm.

Connections, device data

Protection class	I
Mains Voltage	100-240 V (AC)
Mains Frequency	60/50 Hz
Power Consumption	Max. 320 W
	In standby mode depending on the equipment 30-40 W
Current Consumption	3.0 -1.5 A

Interfaces

RS-232	Baud: 1200-115200, 8- bit; suitable connection cord: 1:1 D-Sub 9 extension lead (connector-jack)
RS-422/485	On optional I/O board, D-Sub 15, Baud: 1200-115200, 8-bit
Ethernet	10/100 Base T with TCP/IP, LPD, RawIP printing, DHCP, HTTPD, FTPD, SNMP
USB (V1.1)	USB-A host port, USB-B device port, Transmission rate 12 Mbps
Signal interface	On optional I/O board, D-Sub 15

Electronic Configuration

CPU	32 bit (NetLogic)
RAM	64 MB SDRAM
ROM	4 MB Flash
Memory card	SD
Realtime-clock	Present
Control Panel	4 buttons
	LCD graphics display with 128x64 pixels, illuminated

Specifications for dispenser

Speed, while the rewinding-Ø is calculated:	75 mm/s (3"/s)
Speed, while the material is fed back:	75 mm/s (3"/s)
Distance dispensing edge - print zero line:	25 mm
Distance punch sensor - print zero line:	71 mm
Max. admissible outer diameter of the rewound backing paper roll:	120 mm

Ambient Conditions

Installation location	<ul style="list-style-type: none"> • Inside buildings • Protected from wind and spray water • Dry • Not in areas with potentially explosive atmosphere
Operating Temperature	5 to 35°C
Storage Temperature	-4 to 60°C
Relative Humidity	35-75% (non-condensing)
Protection category	IP 21
Noise	< 70dB(A)
Sea level	Operation to max. 2000 m above sea level

Certificates and Markings

CE, TÜV-Mark, _CTÜV_{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.“

(XLP 506) Print width limitations

If the max. values given in the following tables are exceeded, malfunction of the power supply will be most probably the consequence, followed by a restart of the printer.

203 dpi printhead

Print speed		Limitations
mm/s	Inch/s	
51	2	Max. admissible print contrast: 120%
76/102	3/4	Max. admissible print contrast at print width > 100 mm: 110% Max. admissible print width at print contrast > 110%: 100 mm
127/152	5/6	Max. admissible print contrast at print width > 75 mm: 85% Max. admissible print width at print contrast > 85%: 75 mm
178/203	7/8	Max. admissible print contrast at print width > 55 mm: 67% Max. admissible print width at print contrast > 67%: 55 mm

[Tab. 10] XLP 506: Print width limitations for 203 dpi printheads.

300 dpi printhead

Print speed		Limitations
mm/s	Inch/s	
51/76	2/3	Max. admissible print contrast: 120%
102	4	Max. admissible print contrast at print width > 100 mm: 105% Max. admissible print width at print contrast > 105%: 100 mm
127	5	Max. admissible print contrast at print width > 75 mm: 88% Max. admissible print width at print contrast > 88%: 75 mm
152	6	Max. admissible print contrast at print width > 65 mm: 74% Max. admissible print width at print contrast > 74%: 65 mm

[Tab. 11] XLP 506: Print width limitations for 300 dpi printheads.

Parameter menu

OVERVIEW

→ Click on a link in the table to get to the parameter description.

Print		Options	
Print contrast	Feed speed ^a	Selection	Start source
X - Printadjust	Voltage offset	L Periph. device	Start offset
Y - Printadjust	Thin line emphas	I/O Board ^b	Start error stop
Print speed		Start print mode	Product length
Delete Job		Reprint signal	Internal Rewinder ^c
Delete Spooler		Feed input	Rewind direction
Material		Pause input	Tear-off edge ^d
Detect label length		Error output	L Dispenseposition
Foil mode		Error polarity	TCS ^e
Punch offset		Status output	Changelabel Mode
Materialtype		Status polarity	Changelab Print
Materiallength		L End print mode	Changelab Length
Materialwidth		Cutter ^f	L Label Eject Mode
Punchmode		Cut mode	LTSA ^g
Punchlevel		Cut speed	Apply mode
Label sens. type		Cut width	Stroke length
Mat. end detect.		Cut position	Appl. waitpos.
L Foil		Double cut	Applicator speed
Foil length		L Rest position	L Restart delay
Outer foil diamet.		Rewinder ^h	Keyboard
L Inner foil diamet.		Rewind direction	External signal
Format		Rewinder adjust	Start print mode ⁱ
Bar code multip.		Rewinder Values	
Tradit. Imaging		Dispenser ^j	
UPC plain-copy		Dispense Mode	
EAN Readline		Dispenseposition	
EAN sep. lines		Display mode	
Rotated barcodes		Dispense counter	
L Print direction		Application mode	

[Tab. 12] Parameter menu part 1

- a) Parameter is only visible with *deactivated* dispense function (Optionen > Auswahl > Peripheriegerät ≠ „Spender“) and with *deactivated* (internal) rewind function (Optionen > Auswahl > Peripheriegerät ≠ „Int. Aufwickler“)
- b) Menu is only visible with installed I/O board
- c) Menu is only visible with activated (internal) rewind function (Options > Selection > Periph. device = „Intern. rewinder“)
- d) Menu is only visible with activated tear-off edge (Options > Selection > Periph. device = „Tear-off edge“)
- e) Menü erscheint nur mit angebaute und aktiviertem TCS (Optionen > Auswahl > Peripheriegerät = „TCS“)
- f) Menu is only visible with activated Cutter („Cutter 2000“)
- g) Menü erscheint nur mit angebaute und aktiviertem LTSA (Optionen > Auswahl > Peripheriegerät = „LTSA“)
- h) Menu is only visible with activated (external) rewinder („Rewinder 2000“)
- i) Parameter is only visible, if Options > External signal = „Singlestart“ or „Stacker fail“
- j) Menu is only visible with activated dispense function (Options > Selection > Periph. device = „Dispenser“)

System	Printer Language	Print interface	Tools
Language 	Print Interpret. 	Print interface 	Diagnostic
Access authoriz. 	EasyPlug Setting	Network	└ Store Parameters 
Factory settings 	└ Character filter 	└ IP Addressassign 	└ Gen.Support Data 
Custom defaults 	└ Character sets 	└ IP address 	└ EasyPl. file log 
Turn-on mode 	└ EasyPlug errors 	└ Net mask 	└ Log files delete 
Hardware Setup	└ Spooler mode 	└ Gateway address 	└ EasyPlug Monitor 
└ Head resistance 	└ StandAlone Input 	└ Port address 	└ EP Monitor Mode 
└ Realtime Clock 	└ #VW/I Interface 	└ Ethernet speed 	Test
Memory	└ Printer ID no. 	└ DHCP host name 	└ Sensor Test 
└ Free store size 	└ Command sequence 	└ Services	└ Cutter test 
└ Ram disk size 	ZPL Setting ^a	└ WEB server 	└ Memory card test 
└ Font downl. area 	└ Manual calibrate 	└ WEB display refr 	└ Print test 
└ Spooler size 	└ Darkness 	└ FTP server 	
└ Data blocks del. 	└ Label top 	└ Time client 	
Print	└ Left Position 	└ Time zone 	
└ Miss. label tol. 	└ Error Indication 	Serial Port 1	
└ Gap detect. mode 	└ Error Checking 	└ Baud rate 	
└ Singlestartquant 	└ Resolution 	└ No. of data bits 	
└ Reprint function 	└ Image Save Path 	└ Parity 	
└ Foil end warning 	└ Label Invert 	└ Stop bits 	
└ Foil warn stop 	Commands	└ Data synch. 	
└ Error reprint 	└ Format Prefix 	└ Serial port mode 	
└ Single-job mode 	└ Control Prefix 	└ Frame error 	
└ Temp. reduction 	└ Delimiter Char 	Serial Port 3 ^b	
└ Print info mode 	└ Command ^PR 	└ Baud rate 	
	└ Command ^MT 	└ No. of data bits 	
	└ Command ^JM 	└ Parity 	
	└ Command ^MD/~SD 	└ Stop bits 	
		└ Data synch. 	
		└ Serial port mode 	
		└ Frame error 	
		Drives	
		└ Drive C 	
		└ Drive D 	

[Tab. 13] Parameter menu part 2

- a) Menu is only visible with activated ZPL interpreter (Printer Language > Print Interpret. = „ZPL Emulation“)
- b) Menu is only visible with installed I/O board

Info		
Model ID	└ Memory Data	Language
Status Printouts	└ RAM memory size	Access authoriz.
└ Demo label	└ Flash mem size	Factory settings
└ Printer Status	└ Storage media	Custom defaults
└ Memory Status	└ SD card ^a	Turn-on mode
└ Font Status	└ USB thumb drive ^b	Hardware Setup
└ Flashdata Status	└ Space for Jobs	└ Head resistance
└ Service Status	└ Max. Labellength	└ Realtime Clock
└ Reference label	└ Custom defaults	Memory
└ Textile Care Sym	└ CPU board data	└ Free store size
Statistics	└ CPU identifier	└ Ram disk size
└ Head run length	└ PCB Revision	└ Font downl. area
└ Roll run length	└ FPGA version	└ Spooler size
└ Cuts on knife ^c	└ MAC Address	└ Data blocks del.
└ Service operations	└ Serial number	Print
└ Head number	└ Production date	└ Miss. label tol.
└ Roll number	└ PCB part number	└ Gap detect. mode
└ Cutter number ^c	└ Board part numb.	└ Singlestartquant
└ Total cuts ^c	└ PowerSupply Data	└ Reprint function
└ Tot. mat. length	└ PS type	└ Foil end warning
└ Tot. foil length	└ PS Temperature	└ Foil warn stop
└ Head strobes	└ Display Data	└ Error reprint
└ Operation time	└ Display Version	└ Single-job mode
└ Total Operation	└ Display serialNr	└ Temp. reduction
System	Measurements	└ Print info mode
└ Module FW. Vers.	└ Foil rest length	
└ System version	└ Foil diameter	
└ System revision	└ Head temperature	
└ System date		
└ Bootloader		
└ uMon		
└ Peripheraldriver		
└ Intern. rewinder		

[Tab. 14] Parameter menu part 3

- a) Parameter is only visible with plugged-in SD card
b) Parameter is only visible with plugged-in thumb drive
c) Menu is only visible with activated Cutter („Cutter 2000“)

ALPHABETICAL PARAMETER LIST

#VW/I Interface -71	DHCP host name -77	Frame error -81
Access authoriz. -63	Dispense counter -60	Free store size -65
Appl. waitpos. -53	Dispense Mode -57	FTP server -78
Application mode -61	Dispenseposition -59	Gap detect. mode -66
Applicator speed -53	Display mode -60	Gateway address -76
Apply mode -52	Display serialNr -100	Gen.Support Data -82
Bar code multip. -44	Display Version -100	Head number -95
Baud rate -79	Double cut -56	Head resistance -64
Board part numb. -100	Drive C -81	Head run length -94
Bootloader -97	Drive D -81	Head strobes -96
Changelab Length -52	EAN Readline -45	Head temperature -101
Changelab Print -52	EAN sep. lines -45	Image Save Path -74
Changelabel Mode -52	EasyPl. file log -82	Inner foil diamet. -44
Character filter -70	EasyPlug errors -71	Intern. rewinder -97
Character sets -70	EasyPlug Monitor -83	IP address -76
Command ^JM -75	End print mode -51	IP Addressassign -75
Command ^MT -75	EP Monitor Mode -83	Keyboard -62
Command ^PR -75	Error Checking -73	Label Eject Mode -52
Command ^MD/~SD -75	Error Indication -73	Label Invert -74
Command sequence -72	Error output -50	Label sens. type -43
Control Prefix -74	Error polarity -51	Label top -73
CPU identifier -99	Error reprint -68	Language -62
Custom defaults -64	Ethernet speed -76	Left Position -73
Custom defaults -99	External signal -62	Log files delete -82
Cut mode -54	Factory settings -63	MAC Address -99
Cut position -56	Feed input -49	Manual calibrate -72
Cut speed -55	Feed speed -47	Mat. end detect. -44
Cut width -56	Flash mem size -98	Materiallength -42
Cuts on knife -95	Flashdata Status -91	Materialtype -42
Cutter number -95	Foil diameter -101	Materialwidth -42
Cutter test -83	Foil end warning -67	Max. Labellength -98
Darkness -73	Foil length -44	Memory card test -83
Data blocks del. -66	Foil mode -41	Memory Status -86
Data synch. -80	Foil rest length -100	Miss. label tol. -66
Delete Job -40	Foil warn stop -67	Model ID -84
Delete Spooler -41	Font downl. area -65	Net mask -76
Delimiter Char -75	Font Status -87	No. of data bits -79
Demo label -84	Format Prefix -74	Operation time -96
Detect label length -41	FPGA version -99	Outer foil diamet. -44

Parity	-79	Reprint signal	-49	Stop bits	-80
Pause input	-50	Resolution	-73	Storage media	-98
PCB part number	-100	Rest position	-56	Store Parameters	-81
PCB Revision	-99	Restart delay	-53	Stroke length	-53
Periph. device	-47	Rewind direction	-59	System date	-97
Peripheraldriver	-97	Rewinder adjust	-59	System revision	-96
Port address	-76	Rewinder Values	-60	System version	-96
Print contrast	-39	Roll number	-95	Temp. reduction	-68
Print direction	-46	Roll run length	-94	Textile Care Sym	-94
Print info mode	-68	Rotated barcodes	-46	Thin line emphas	-47
Print interface	-69	SD card	-98	Time client	-78
Print Interpret.	-69	Sensor Test	-83	Time zone	-79
Print speed	-40	Serial number	-99	Tot. foil length	-96
Print test	-83	Serial port mode	-80	Tot. mat. length	-96
Printer ID no.	-72	Service operations	-95	Total cuts	-95
Printer Status	-85	Service Status	-92	Total Operation	-96
Product length	-62	Single-job mode	-68	Tradit. Imaging	-45
Production date	-99	Singlestartquant	-67	Turn-on mode	-64
PS Temperature	-100	Space for Jobs	-98	uMon	-97
PS type	-100	Spooler mode	-71	UPC plain-copy	-45
Punch offset	-41	Spooler size	-66	USB thumb drive	-98
Punchlevel	-43	StandAlone Input	-71	Voltage offset	-47
Punchmode	-42	Start error stop	-61	WEB display refr	-78
Ram disk size	-65	Start offset	-61	WEB server	-77
RAM memory size	-97	Start print mode	-49	X - Printadjust	-40
Realtime Clock	-64	Start source	-61	Y - Printadjust	-40
Reference label	-93	Status output	-51		
Reprint function	-67	Status polarity	-51		

PARAMETER REFERENCE

Print contrast

Setting range	Default setting	Step width	Easy Plug
[1...105] %	75%	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.

The highest setable print contrast depends on two factors (see tables below):

- Print head resolution
- Print speed

Print speed	Max. print contrast
51 mm/s (2 inch/s)	120%
76 mm/s (3 inch/s)	117%
102 mm/s (4 inch/s)	115%
127 mm/s (5 inch/s)	100%
152 mm/s (6 inch/s)	85%
178 mm/s (7 inch/s)	76%
203 mm/s (8 inch/s)	67%

[Tab. 1] Max. print contrast for print heads with 203 dpi resolution.

Print speed	Max. print contrast
<= 76 mm/s (3 inch/s)	120%
102 mm/s (4 inch/s)	105%
127 mm/s (5 inch/s)	88%
152 mm/s (6 inch/s)	74%

[Tab. 2] Max. print contrast for print heads with 300 dpi resolution.

Printspeed	Max. print contrast
51 mm/s (2 inch/s)	100%
76 mm/s (3 inch/s)	90%
102 mm/s (4 inch/s)	70%
127 mm/s (5 inch/s)	60%
152 mm/s (6 inch/s)	50%

[Tab. 3] Max. print contrast for printheads with 600 dpi resolution.

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. length-ways 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	Default setting	Step width	Easy Plug
203 dpi: [2..10] Inch/s			
300 dpi: [2..8] Inch/s	4 Inch/s	1 Inch/s	#PC1003, #PR
600 dpi: [2..6] Inch/s			

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

Pressing key 4 cancels the active print job.

Delete Spooler

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

Pressing key 4 deletes all print jobs queued in the spooler.

Foil mode

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

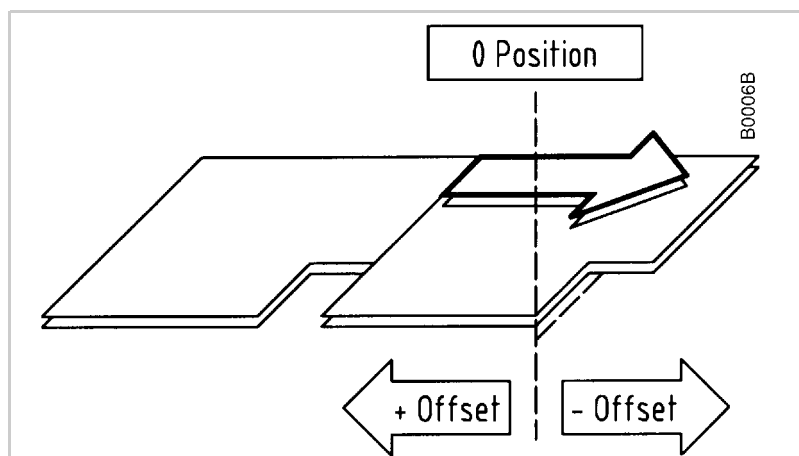
- *Thermo transfer*: Thermo transfer printing (ribbon end sensor is switched on)
- *Thermal printing*: Thermo direct printing (ribbon end sensor is switched off)

Punch offset

Setting range	Default setting	Step width	Easy Plug
-8...max. label length ^a	0 mm	0.1 mm	#PC1008, #PO

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

The zero position can be determined offset in millimetre steps from the detected gap position [1].



[1] Positive and negative offset in relation to the feed direction (arrow).

- Maximum offset in feed direction: -8 mm
- Minimum offset against feed direction: +max. label length

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

Detect label length

➡ Only works if label material is inserted.

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

Materialtype

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.

Materiallength

Settings	Default setting	Step width	Easy Plug
[5...max. label length ^{a)}	100 mm	0.1 mm	#

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

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.

Materialwidth

Settings	Default setting	Step width	Easy Plug
6,0...max. width ^{a)}	100 mm	0.1 mm	#IM, #PC1007

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

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

Punchmode

Settings	Default setting	Step width	Easy Plug
Auto negotiation, Manual	Auto negotiation	--	#PC1022

- *Auto negotiation*: Automatic mode, for material with a contrast zone = gap in the label. Suitable for all materials with which there is a difference in the transparency between the label and gap of more than 2 values (see Description, sensor check).
The range of the value automatically measured by the gap detection can be defined specifically for the label material. This allows materials with high-contrast proof points within the label to be processed, which would otherwise be measured as 'false' gaps by the system. The corresponding setting value is then equal to, or smaller than, the value measured at the actual gap.
- *Manual*: Manual setting, for material with several varying contrast zones. Settings are made using the parameter **Print > Material > Punchlevel**.

Punchlevel

Settings	Default setting	Step width	Easy Plug
0...255	--	1	#PC1023

➡ Only if Print > Material > Punchmode = „Manual“

The value xxx stands for the current contrast within the photoelectric switch of the material which has just been inserted. This serves to determine a threshold value for the inserted material.

Punch level	
Measured:	xxx
AdjLevel:	yyy

xxx = current measurement at the punch sensor

yyy = set threshold value

Example: Self-adhesive material with black bars lengthways across the label.

Reading:

- Masking paper: 30
- Masking paper + label: 60
- Masking paper + label + black bars: 190
- Recommended setting: 60

A setting value of 60 means that all readings over 60 are ignored, therefore also the reading 190 at the black bar.

Label sens. type

(Label sensor type)

Settings	Default setting	Step width	Easy Plug
Punched, Reflex, Reflex (upper), Short label opt.	Punched	--	#PC2015, #IM

The optional reflex photoelectric switch for labels with reflecting length markings, or the normal factory-fitted photoelectric switch for labels with transparent or register gaps (self-adhesive labels), must be defined according to the application.

- *Punched*: Transparent photoelectric switch (for gaps)
 - *Reflex*: Reflex photoelectric switch (for black marks on the bottom side)
 - *Reflex (upper)*: n. a.
 - *Short label opt.*: Activates the optional short label sensor
- ➡ Appears only in XLP 504 printers which are equipped with the short label sensor.

Mat. end detect.

(Material end detection)

Settings	Default setting	Step width	Easy Plug
Off, Transparent	Transparent	--	--

The material end detection can be deactivated for processing labels with gaps longer than 15 mm, or if using material with a high fluctuation in light transparency (Status message „5002 material end“ is displayed even though material is present)..

CAUTION!

Soiling or damaging the print roller.

→ Endless (= not converted) material should not be processed when the material end detection is deactivated (otherwise, printing is continued on the print roller after material end).

- *Off*: No material end detection
- *Transparent*: Material end detection by means of a transmission sensor

Foil length

Setting range	Default setting	Step width	Easy Plug
[300...500] m	450 m	10 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 foil diamet.

(Outer ribbon roll diameter)

Setting range	Default setting	Step width	Easy Plug
[50.0...100.0] mm	79.1 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 foil diamet.

(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!

Bar code multip.

(Bar code height scaling factor)

Setting range	Default setting	Step width	Easy Plug
[1...10]	1	1	#PC1009, #YB

Increases the bar code height defined in the label layout (Easy Plug) by multiplication by a factor of 1 to 10.

Tradit. Imaging

Setting range	Default setting	Step width	Easy Plug
No, Yes	No	--	

■ Only in service mode

Up to firmware version x.31, the barcode height was calculated with the formula:

$$\text{Barcodeheight}_{Print} = (\text{Barcodeheight}_{Layout} + 1) \cdot x$$

with $x = \text{Print} > \text{Format} > \text{Bar code mult.}$

By doing so, the printed barcode height in millimeters was by 1 higher than the value defined in the layout (1 --> 2 mm, 2 --> 3 mm, etc.)¹.

From firmware version x.31 on, the printed barcode is exactly as high in millimeters, as the value in the layout is (1 --> 1 mm, 2 --> 2 mm, etc.)¹.

- **No:** New height calculation (1 --> 1 mm, 2 --> 2 mm, etc.) is applied.
The plain copy line is printed with OCR-B font.
- **Yes:** Setting for customers with print layouts based on the *old* height calculation scheme.
The plain copy line of the barcodes EAN8, EAN13, UPC-A and UPC-E is printed with the same fonts, which older printer types like TTK or TTX x50 have used.

UPC plain-copy

Setting range	Default setting	Step width	Easy Plug
In line, Raised	In line	--	#PC1010, #YB

The position of the first and last digit in the plain-copy line - underneath the bar code - can be adjusted as required.

- **Raised:** First and last digit of the UPCA or first digit with the UPCE are raised.
- **In line:** All digits in the decoded line are in line under the code.

EAN Readline

Setting range	Default setting	Step width	Easy Plug
Standard, <> Signs	Standard	--	#PC1011, #YB

- **Standard:** Readline without "<>" or ">" signs.
- **<> Signs:** Readline enclosed in "<>" signs or terminated by a ">"-Sign (EAN 13).

EAN sep. lines

Setting range	Default setting	Step width	Easy Plug
With readl. only, Always long	With readl. only	--	

EAN separation lines. Parameter for controlling of EAN or UPC barcodes if they are printed without readline.

- **With readl. only:** The separation bars at the beginning, middle, and the end of the barcode are only long, if the barcode is printed with a readline.
- **Always long:** The separation bars at the beginning, middle, and the end of the barcode are always long, regardless if the barcode is printed with or without readline. The position of the barcode is the same as with the readline option switched on.

1) Assumed that $\text{Print} > \text{Format} > \text{Bar code mult.} = „1“$

Rotated barcodes

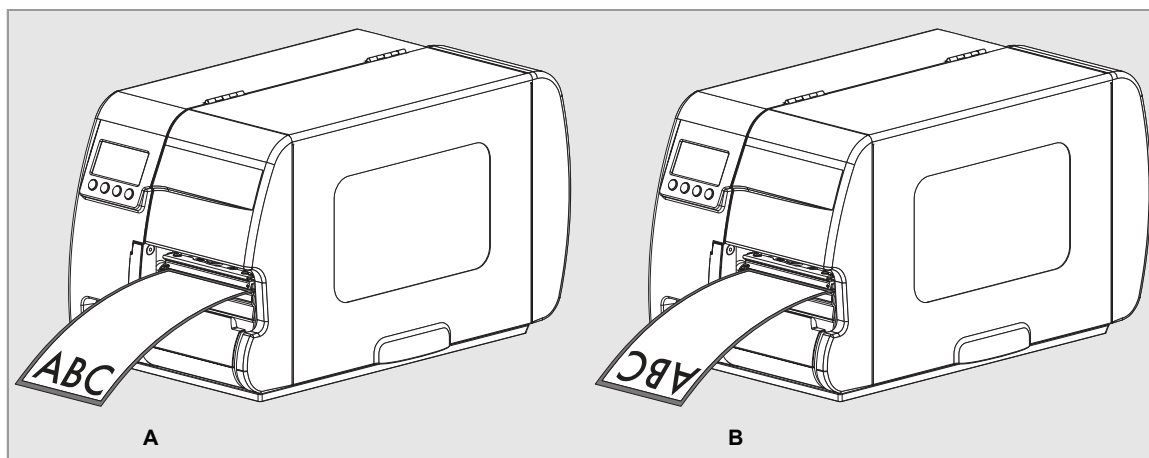
Setting range	Default setting	Step width	Easy Plug
Normal, Optimized	Optimized	--	#PC1013, #YB

Improves readability of rotated (90° and 270°) bar codes.

- *Normal*: „Normal“ printing without special processing of rotated bar codes.
- *Optimized*: The line and gap widths of rotated bar codes are modified to improve readability.

Print direction

Setting range	Default setting	Step width	Easy Plug
Foot first, Head first	Foot first	--	#PC1027



[2] Orientation of the printout „Foot first“ (A) or „Head first“ (B).

- *Foot first*: Orientation of the printout according to [2A].
- *Head first*: Orientation of the printout according to [2B]. Mind the following:

▮ Define the „true“ label length (without gap length) in parameter **Print > Material > Materiallength** length. If the label gap is wider than 5 mm, the parameter **System > Druck > Miss. label tol.** must be set to a value more than zero.

▮ The distance between material base line and the first printable dot is 1 mm. To keep this distance while printing „head first“, the material width must be calculated as follows:

$$b_{Mat} = b_{Tr} - 2mm, \text{ with}$$

b_{Mat} : Material width

b_{Tr} : Backing paper width

Feed speed

Setting range	Default setting	Step width	Easy Plug
[2.0...6.0] Inch/s	4.0 Inch/s	1 Inch/s	#PC1004, #PR

Parameter is only visible with *deactivated* dispense function (Options > Selection > Periph. device ≠ „Dispenser“) and with *deactivated* (internal) rewind function (Options > Selection > Periph. device ≠ „Intern. rewinder“)

Setting:

The value for the feed speed should not be set too high for print applications with long calculating units (e. g. consecutive numbering). This can help to avoid alternating between abrupt braking to 0 (zero) and acceleration to print speed.

When altering the print speed, the feed speed is equal to the print speed. If a different feed speed is required, this must be set again.

Voltage offset

Setting range	Default setting	Step width	Easy Plug
[0...20] %	0%	1 %	#PC2027

The voltage offset increases the head voltage and therefore the head temperature which e.g. was set by Easy Plug command (HV).

Thin line emphasis

(Thin line emphasis)

Settings	Default setting	Step width	Easy Plug
On, Off	On	--	#PC2066

Print emphasis for thin lines in order to get a better print result.

- **On:** Print emphasis for thin lines is switched on.
Thin lines in the printout, which run crossways to the printing direction, are printed approx. 1.5 times wider. This may have the effect, that small white patches are closed with color (e.g. in the „e“ with very small fonts)
- **Off:** Print emphasis for thin lines is switched off

Periph. device

Settings	Default setting	Step width	Easy Plug
None, Cutter, Rewinder, Tear-off edge, Dispenser, Intern. rewinder, LTSA, TCS	Tear-off edge	--	PC2031

After installation, options must be selected under "Peripheral device" in order to be assured of the corresponding sensor queries and printer reactions.

CAUTION!

Selecting an incorrect option can lead to malfunctions or damage.

- **None:** No peripheral device is installed.
- **Cutter:** Sets the printer firmware to the cutter option. Selection permits access to the cut parameters.
- **Rewinder:** Sets the printer firmware to the rewinder option. Selection permits access to the rewinder setting parameters.

- *Tear-off edge*: Sets the printer firmware to the tear-off edge option. The punch is fed forward to the tear-off edge.

- *Dispenser*: Activates the dispensing option (requires internal rewind option + dispensing edge).
- *Intern. rewinder*: Activates the internal rewind option (requires internal rewind option + deflection plate).
- *LTSA*: Activates both, the applicator and the dispenser options.
- *TCS*: Activates the cutter-stacker option.

Start print mode

Settings	Default setting	Step width	Easy Plug
Pulse falling, Pulse rising, Pulse fall/ris, Level low active, Level high active	Pulse falling	--	#PC3203 ^a #PC2043 ^b

a) Options > I/O Board > Start print mode

b) System > Print > Start print mode

Defines, how the start signal at the signal input is interpreted. Signal inputs for the start signal are the singlestart input or the respective pin at the I/O board (option).

Precondition: Options > Externes Signal = „Singlestart“ (See **External signal** on page 62).

- *Pulse falling*: The printing of a label is triggered by a high-low-change of the start signal. The printing occurs only after the set delay time
- *Pulse rising*: The printing of a label is triggered by a low-high-change of the start signal. The printing occurs only after the set delay time.
- *Pulse fall/ris*: The printing of a label is triggered by a low-high-change as well as by a high-low-change of the start signal. The printing occurs only after the set delay time.
- *Level low active*: Labels are being printed as long as the start signal is held low.
- *Level high active*: Labels are being printed as long as the start signal is held high.

Reprint signal

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC3005

➡ Only with an I/O board mounted.

The last printed label will be reprinted on the falling edge of the REPRINT signal.

- *Off*: The input signal is disabled.
- *On*: The last printed label will be reprinted on the falling edge of the REPRINT signal.

Preconditions:

- The label to be reprinted, should be printed and dispensed.
- Printer is „Ready“.

➡ If a REPRINT is triggered while the printer is in “I/O-Board Pause” mode, the reprint will proceed as soon as the printer is switched back in online mode. Precondition: in *level mode* START PRINT must be inactive.

Feed input

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

➡ Only with an I/O board mounted.

Concerns the input signal FEED at the signal interface.

- *Off*: Signals at the FEED input are ignored.
- *On*: Feeding of one label on the falling signal edge. The display shows „I/O board feed“ during feeding.

Requirements are:

- Offline mode or „stopped mode“ or „I/O pause mode“.
- Online mode and no print job loaded.

Pause input

Settings	Default setting	Step width	Easy Plug
Off, Pause	Off	--	#PC3012

■ Only with an I/O board mounted.

Concerns the input signal PAUSE at the signal interface.

- *Off*: Signals at the PAUSE input are ignored.
- *Pause*: A high-to-low transition switches the printer into the „I/O-Board Pause“ mode. The next high-low-transition switches the printer back into the online mode. If parameter Options > I/O Board > Start print mode is set to „Level high active“ or „Level low active“, any activating of the PAUSE signal stops the printing after the current label

Features:

- Printer display shows „I/O-Board pause“
- ERROR is active (only if Options > I/O Board > Error output = „Printererr +Offl“)
- If a print job is available: DATA READY becomes inactive (if Options > I/O Board > Status output = „Print job ready“)
- START PRINT signals are suppressed
- REPRINT requests are processed after switching into online mode

Error output

Settings	Default setting	Step width	Easy Plug
Printer error, Printererr +Offl	Printer error	--	#PC3207

■ Only with an I/O board mounted.

This parameter defines different events, which activate the output signal ERROR.

- *Printer error*: ERROR will be activated in all of the following cases:
 - Material end
 - Ribbon end (only if Print > Material > Foil mode = „Thermo transfer“)
 - No punch recognized (only if Print > Material > Materialtype = „Punched“)
 - Print head pressure lever was opened during the printing of a label.
 - Start print error
 - Other errors, which keep the printer from printing
- During the initialization (powering up) of the printer, the ERROR-signal is instable!
- *Printererr +Offl*: In addition to the above mentioned cases activate the following events the ERROR-signal:
 - The printer is in offline mode
 - The print head pressure lever is open
 - „I/O board pause“ mode
 - Stopped mode (the printing was stopped)

Error polarity

Settings	Default setting	Step width	Easy Plug
Level high activ, Level low active	Level low active	--	#PC3208

■ Only with an I/O board mounted.

Switches the polarity of the ERROR signal

- *Level high activ*: The output is high when it is active, otherwise low.
- *Level low active*: The output is low when it is active, otherwise high.

Status output

Settings	Default setting	Step width	Easy Plug
Foil end warning, Print job ready	Foil end warning	--	#PC3209

■ Only with an I/O board mounted.

This parameter defines different events, which activate the output signal MACHINE STATUS.

- *Foil end warning*: The signal is activated, if the ribbon roll diameter is less than the limit..
See parameter **Foil end warning** on page 67.
- *Print job ready*: The signal is activated, if the printer has finished image processing and is ready to start printing.

The signal is not activated, if:

- the print job is done,
- the print job was stopped,
- the printer was switched to offline mode,
- the printer is in pause mode.

Status polarity

Settings	Default setting	Step width	Easy Plug
Level high activ, Level low active	Level low active	--	#PC3210

■ Only with an I/O board mounted.

Switches the polarity of the MACHINE STATUS signal.

- *Level high activ*: The output is high when it is active, otherwise low.
- *Level low active*: The output is low when it is active, otherwise high.

End print mode

Settings	Default setting	Step width	Easy Plug
Mode0 inactive, Mode1 low level, Mode2 high level, Mode3 low pulse, Mode4 high pulse	Mode0 inactive	--	#PC3211

■ Only with an I/O board mounted.

■ Not available in batch mode.

Concerns the output signal PRINT_END at the I/O board signal interface. Determines the signal response after printing of a label.

- *Mode0 inactive*: No print end signal.
- *Mode1 low level*: Low, if the print module is just printing a label, otherwise high. The output is also deactivated (= low) as long as labels are fed with “Feed Button” or “Feed Signal”.
- *Mode2 high level*: High, if the print module is just printing a label, otherwise low. The output is also deactivated (= high) as long as labels are fed with “Feed Button” or “Feed Signal”.
- *Mode3 low pulse*: Low for 20 ms after printing and dispensing a label. The output is also activated (= low) after a label is fed with “Feed Button” or “Feed Signal”.
- *Mode4 high pulse*: High for 20 ms after printing and dispensing a label. The output is also activated (= high) after a label is fed with “Feed Button” or “Feed Signal”.

Changelabel Mode

Settings	Default setting	Step width	Easy Plug
Easyplug select, Always at jobend	Easyplug select	--	#ER #PC3301

➡ Only with installed and activated TCS.

Defines, when a change label is printed.

- *Easyplug select*: Change label is printed only after an Easy Plug command.
- *Always at jobend*: Change label is *always* printed as the last label of a printjob.

Changelab Print

Settings	Default setting	Step width	Easy Plug
Empty, With print	With print	--	#PC3302

➡ Only with installed and activated TCS.

Defines, if the changelabel is printed or not.

- *Empty*: Changelabel without printing.
- *With print*: Changelabel with printing (= last label of the print job).

Changelab Length

Settings	Default setting	Step width	Easy Plug
[5..40] mm	10 mm	1 mm	#PC3303

➡ Only with installed and activated TCS.

Defines how much longer the changelabel is (that is, how much it protrudes from the stack).

Label Eject Mode

Settings	Default setting	Step width	Easy Plug
No, Yes, at job end	No	--	#PC3304

➡ Only with installed and activated TCS.

Apply mode

Settings	Default setting	Step width	Easy Plug
After start sig., After print	After start sig.	--	#PC3152

➡ Only with installed and activated LTSA.

Defines, if the application process starts with applying („After start sig.“) or with printing („After print“). Requirements: Printjob transferred, printer is switched „Online“ (display „Home“).

- *After start sig.*: The start signal triggers the application of an already printed and dispensed label. After applying the label, the next one is immediately printed and dispensed. Precondition: A printjob is loaded and the printer is in online mode.
- *After print*: The start signal triggers the immediate printing, dispensing and applying of a label. Precondition: A printjob is loaded and the printer is in online mode.

Stroke length

Settings	Default setting	Step width	Easy Plug
[30..192] mm	190 mm	1 mm	#PC3153

➡ Only with installed and activated LTSA.

If the applicator foot reaches the stroke length without touching a product, it returns automatically to home position and the printer shows an error message. For applications with short stroke length, the stroke length can be reduced accordingly.

Appl. waitpos.

(Applicator waiting position)

Settings	Default setting	Step width	Easy Plug
[0..399] mm	0 mm	1 mm	#PC3154

➡ Only with installed and activated LTSA.

➡ Only works with the setting Options > LTSA > Apply mode = „After start sig.“.

- Waiting position *not* activated: The applicator foot waits in front of the dispensing edge (home position) for the start signal.
- Waiting position activated: After the label has been dispensed onto it, the applicator foot moves to a waiting position below the home position. Advantage: shorter application time due to the shorter (rest) stroke.

Applicator speed

Settings	Default setting	Step width	Easy Plug
[80..580] mm/s	350 mm/s	1 mm/s	#PC3155

➡ Only with installed and activated LTSA.

Setting of the speed, with which the applicator foot approaches the product.

Restart delay

Settings	Default setting	Step width	Easy Plug
[0..99999] ms	0 ms	1 ms	#PC3158

➡ Only with installed and activated LTSA.

Sets the delay time after the application, during which no start signals are accepted.

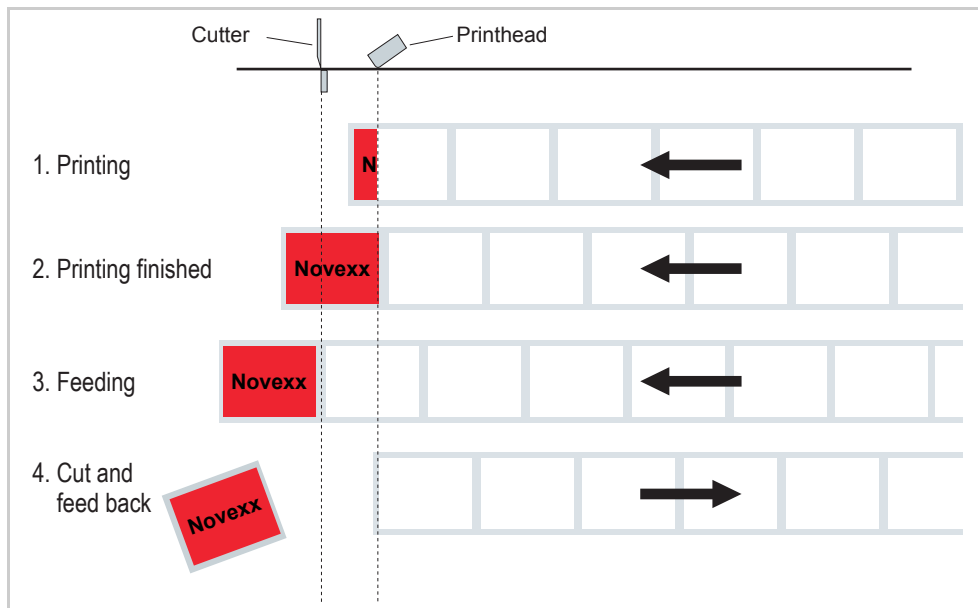
Cut mode

Settings	Default setting	Step width	Easy Plug
Real 1:1 mode, Batch mode, Normal 1:1 mode	Real 1:1 mode	--	#PC1014

► Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

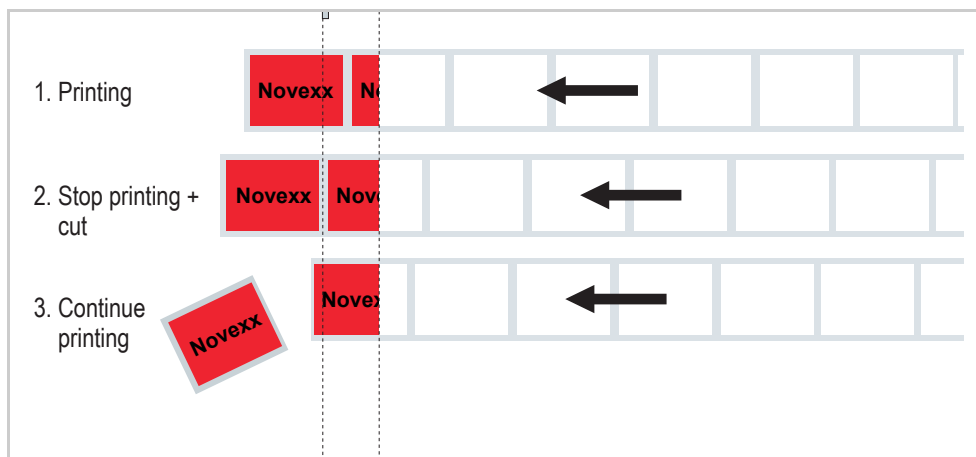
This is where the procedure for the label output and cut is defined.

- *Real 1:1 mode*: The whole surface of the label is printable. The label is pushed forward to the cutter for cutting. After the cut, the beginning of the next label is drawn back under the print head. This reduces the output volume (in relation to a certain time).



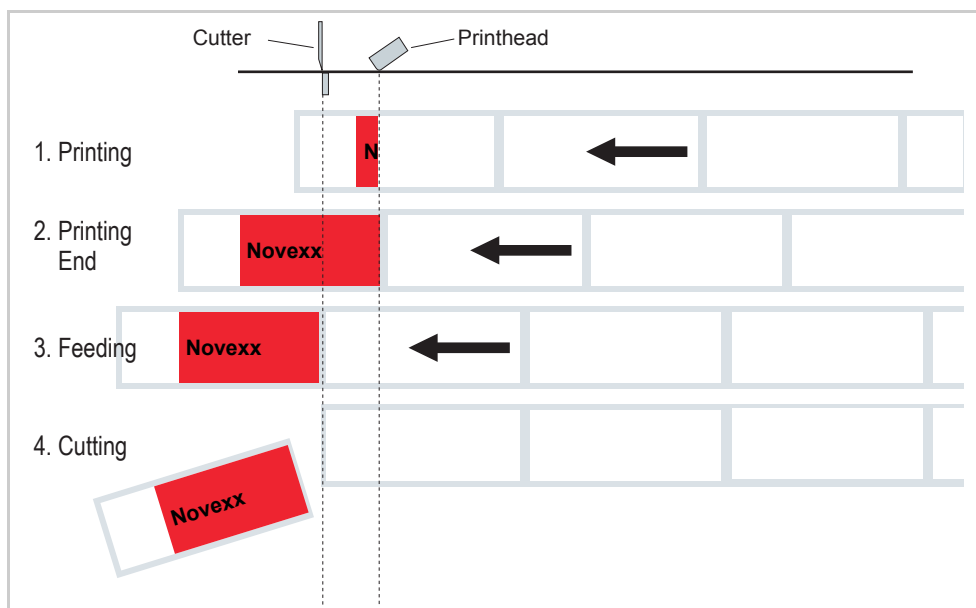
[3] Printing process (schematic) in „Real 1:1 Mode“.

- *Batch mode*: Requirements for the batch mode are:
 - Material length >18 mm
 - Number of cuts for a print job - at least 2 or more



[4] Printing process in Batch mode (schematic).

- **Normal 1:1 mode:** In N1:1 mode, cutting takes place during printing. The zero-line of the printing is shifted 18 mm in y-direction. This offset equals the distance cutter-print head. Caused by this shifting, the first 18 mm of the label are not printable. These measurement corresponds to the distance between print head and cutter. The output volume is at its maximum level. (The offset of the zero-line is caused historically and serves the compatibility of older printer models).



[5] Printing process in Normal 1:1 mode (schematic).

Cut speed

Setting range	Default setting	Step width	Easy Plug
[2...5]	3	1	#PC1015

➡ Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

The cut speed is to be adjusted to the material thickness and strength.

- 2: Extremely slow; for thick and strong material
- 5: Extremely fast; for thin material

Cut width

Setting range	Default setting	Step width	Easy Plug
[0...MAX_CUT_WIDTH]	MAX_CUT_WIDTH	--	#PC1016, #CW

➡ Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

The values for MAX_CUT_WIDTH depend on printer type and print head:

Printer	MAX_CUT_WIDTH
XLP 504 with 203 dpi	104
XLP 504 with 300 dpi	105
XLP 506 with 203 dpi	168
XLP 506 with 300 dpi	168

➡ The values for MAX_CUT_WIDTH don't equate to the real cut width (no linear relation between value and cut width). The proper setting value has to be determined by trying.

Cut position

Setting range	Default setting	Step width	Easy Plug
[-5.0...5.0] mm	0 mm	0.1 mm	#PC1017

➡ Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

The cut position is identical to the detected gap position, i. e. with the start of the label.

This parameter can be used for fine settings to meet specific customer requirements.

- Maximum offset in feed direction: -5,0 mm
- No offset: 0 mm
- Minimum offset against feed direction: +5,0 mm

Double cut

Setting range	Default setting	Step width	Easy Plug
[0.0...5.0] mm	0.0 mm	0.1 mm	#PC1018, #ER

➡ Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

Joining grids or the gap area between the labels can be removed using a double cut, thereby improving the outline.

The first cut is offset by the distance set from the recognized gap position away in the feed direction, the second cut is made at the gap position.

A possible correction of the cut position ("Cut position" function) is calculated for both cuts and must be taken into consideration.

Normal simple cut: 0,0 mm

➡ The smallest possible double cut distance of 1.0 mm must be adhered to!

Rest position

Settings	Default setting	Step width	Easy Plug
at head, at cutter	at head	--	#PC1041

➡ Only with mounted and activated cutter (Options > Selection > Periph. device = „Cutter“).

To avoid that the label material is wrapped around the print roller after a long idle time, the material rest position can be changed to „at cutter“.

- *at head*: The material rest position in idle times is at the print head
- *at cutter*: The material rest position in idle times is at the cutter to avoid material being wrapped around the print roller

Dispense Mode

Settings	Default setting	Step width	Easy Plug
Normal 1:1 mode, Batch mode, Real 1:1 mode	Real 1:1 mode	--	#PC1014

Governs the run of the print-dispense procedure.

☛ Only if Options > Selection > Periph. device = „Dispenser“.

Normal 1:1 mode

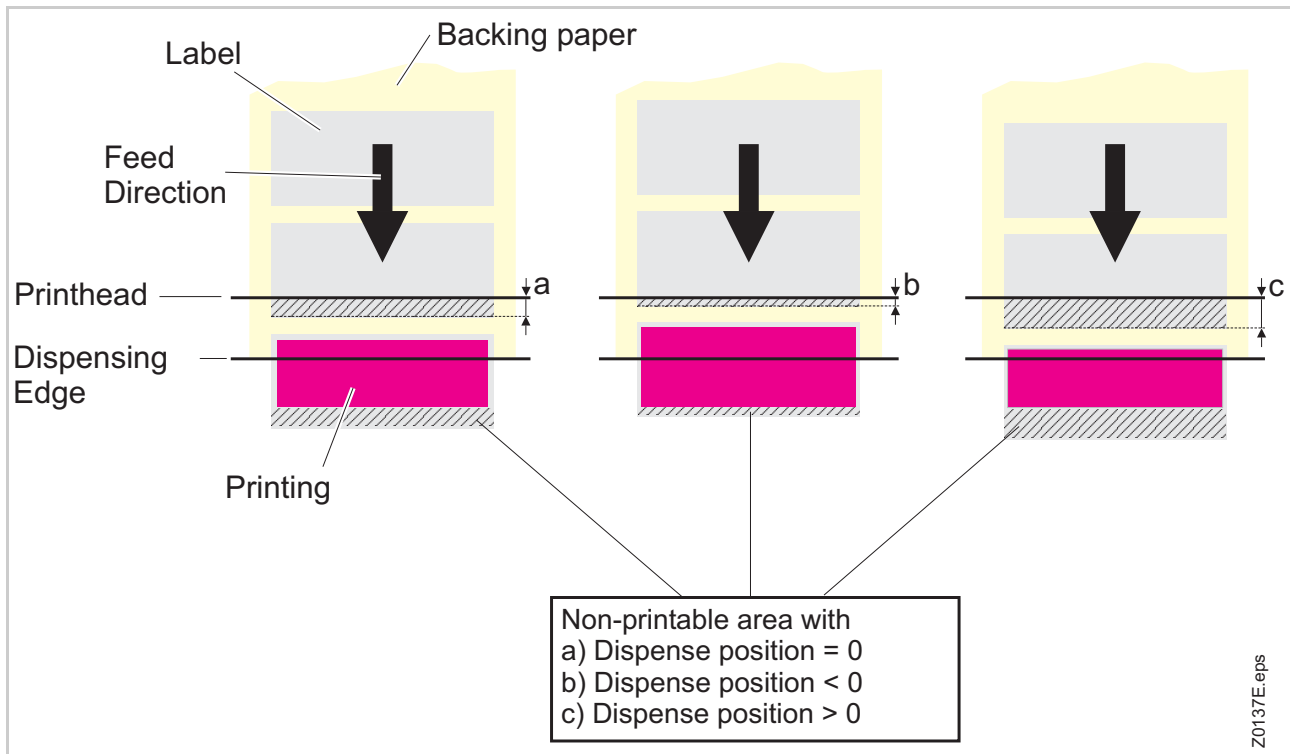
- The printer cannot print on the whole label surface. A stripe at the label beginning stays unprinted. The width of the unprintable stripe is calculated as follows:

Distance print line to dispensing edge (25 mm) + Dispense position

See also: Parameter Options > Dispenser > Dispenseposition.

- The label is being dispensed while printing.
- The output volume is at its maximum level.

Find an illustration of the sequence in the description of the „Normal 1:1 mode“ for the cut function (see parameter **Cut mode** □ on page 54).



[6] The size of the not imprintable area in Normal 1:1 depends of the setting of parameter Options > Dispenser > Dispenseposition eingestellt ist.

Batch mode

- The printer can print the whole label surface.
- Dispensing of the label takes place during printing. Printing of the next label is interrupted until the label is completely dispensed.
- The output volume is at its maximum level.

■ The Batch mode is optimised for printing and dispensing at high speeds. Due to this, it is not possible to use all features available in modes *Normal 1:1* or *Real 1:1*. Also consider, that printing data must be available on time and in sufficient quantity.


■ Print jobs *must not* contain the following field types:

- Counter fields
- Variable fields

Find an illustration of the sequence in the description of the „Batch mode“ for the cut function (see parameter **Cut mode** □ on page 54).

Real 1:1 mode

- The printer can print the whole label surface.
- After dispensing a label, the beginning of the next label is drawn back under the print head.
- The output volume is lower than in *Batch Mode* or *Normal 1:1 Mode*.

Find an illustration of the sequence in the description of the „Real 1:1 Mode“ for the cut function (see parameter **Cut mode**  on page 54).

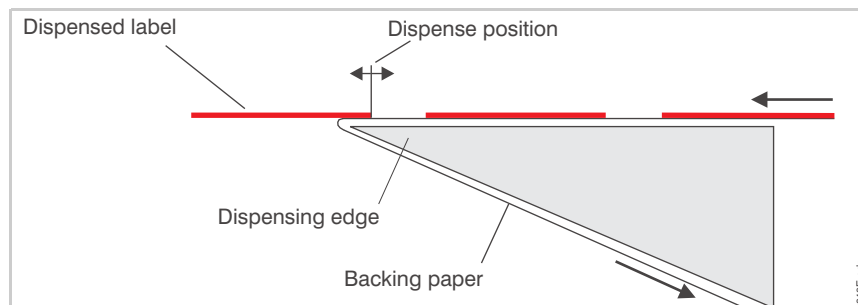
Dispenseposition

Setting range	Default setting	Step width	Easy Plug
[-30.0...20.0] mm	-6.0 mm	0.1 mm	#PC1017

➡ Only if Options > Selection > Periph. device = „Tear-off edge“ or „Dispenser“.

Adjusts the dispense position in („+“) or against („-“) the feed direction. Depending on the set dispense position, the dispensed label sticks to the backing paper with a more or less wide strip [7]. The required width of this strip depends on the further processing.

➡ Dispenseposition 0 mm means the front edge of the label is flush with the dispensing edge.



[7] Dispense position of the dispensed label..

Rewind direction

Settings	Default setting	Step width	Easy Plug
Printing inside, Printing outside	Printing outside	--	#PC1019

➡ Only with installed and activated „Rewinder 2000“ (Options > Selection > Periph. device = „Rewinder“).

- *Printing inside*: The label face shows *inwards*, when the label stock is wound up.
- *Printing outside*: The label face shows *outwards*, when the label stock is wound up.

Rewinder adjust

Setting range	Default setting	Step width	Easy Plug
		--	

➡ Only with installed and activated „Rewinder 2000“ (Options > Selection > Periph. device = „Rewinder“).

The rewinder setup compensates differences in characteristic or assembly of the light barrier.

A setting instruction for the *external rewinder* „Rewinder 2000“ can be found in the „User Manual Rewinder 2000“, topic section „Attachement, Setup“, chapter „Setting up 64-xx / AP 5.4 / AP 7.t“ > „Adjusting the sensor“.

- *loose xxx*: Setup of the loose dancer arm (xxx = actual sensor value).

- *tightened* xxx: Setup of the tightened dancer arm (xxx = actual sensor value).

The setting follows in both cases this scheme:

1. Bring the dancer arm to its loose position.
2. Press key 3.
3. Pull the dancer arm tight.
4. Press key 2.

Rewinder Values

Setting range	Default setting	Step width	Easy Plug
--	--	--	--

► Only with installed and activated „Rewinder 2000“ (Options > Selection > Periph. device = „Rewinder“).

Shows the values of the position sensor at the rewinder dancer arm in middle/tightened and in loose position.

Rewinder values
xxx <----- text -----> yyy

- xxx = Sensor value in *loose* position
- text = Sensor type (Opto = light barrier; Hall = hall sensor; ???? = no explicit sensor type)
- yyy = Sensor value in *middle* position

A setting instruction for the *external rewinder* „Rewinder 2000“ can be found in the „User Manual Rewinder 2000“, topic section „Attachement, Setup“, chapter „Setting up 64-xx / AP 5.4 / AP 7.t“ > „Adjusting the sensor“.

Display mode

Settings	Default setting	Step width	Easy Plug
Job rest quant., Dispense counter		--	#PC2004

► Only if Options > Selection > Periph. device = „Dispenser“.

Makes the number of already printed labels appear in the display instead of the number of the not yet printed ones.

- *Job rest quant.*: Display of the *not yet* printed labels of a print job.
► The counter keeps it's value even after switching the printer off.
- *Dispense counter*: Counting of start pulses. Activate the counter by selecting "Dispense counter". The counted number appears on the display after the parameter *Dispense counter* (see below) has been selected.

Dispense counter

Setting range	Default setting	Step width	Easy Plug
--	--	--	#PC2005

► Only if Options > Selection > Periph. device = „Dispenser“

Dispense counter
xxxxxx

xxxxxx = Number of dispensed labels.

There are two ways of setting back the counter:

- Set the parameter *Display mode* (see above) to "Job rest quant." , then back to "Dispense counter" and confirm by pressing the o. k. key.
- Reduce the displayed number.

Application mode

Settings	Default setting	Step width	Easy Plug
Safe mode, Immediate mode	Immediate mode	--	#PC2035

► Only if Options > Selection > Periph. device = „Dispenser“.

- *Safe mode*: A start signal is required to draw the next label back under the print head. This setting bears advantages for label material with a strong adhesive, which would not stay attached to the applicator when the backing paper is fed backwards.
- *Immediate mode*: After the just printed label has reached the dispense position, the following label is drawn back under the print head. The dispensed label stays attached to the applicator.

Preconditions:

- With foot switch: Options > Start print mode = „Pulse rising“ or „Pulse falling“
- With I/O board: Options > I/O Board > Start print mode = „Pulse rising“ or „Pulse falling“

Start source

Settings	Default setting	Step width	Easy Plug
Foot switch, Light barrier	Light barrier	--	#PC2039

► Only if Options > Selection > Periph. device = „Dispenser“.

Choose a signal source for the start signal:

- *Foot switch*: Optional foot switch is used to generate the start signal.
- *Light barrier*: Photoelectric switch at the dispensing edge which detects the taking off of the dispensed label.
► The setting "Light barrier" is unsuitable for product sensors! Product sensors must be connected to the I/O board!

Start offset

Setting range	Default setting	Step width	Easy Plug
[15.0...2999.9] mm	15.0 mm	0.1 mm	#PC6004

► Function for operation with product sensor.

Use this parameter to set the distance between product sensor (light barrier) and dispensing edge. The recommended delay time is calculated of the "Start delay" distance and the conveyor speed (= print speed in cases of direct application).

Start error stop

Settings	Default setting	Step width	Easy Plug
On, Off	On	--	#PC3009

► Function for operation with product sensor.

Determines the reaction of the machine on a product start error. A product start error occurs in the following cases:

- If a further start signal arrives, before the current label is completely printed.
 - *Only with I/O board:* If a reprint is requested, before the first label after powering on is printed.
 - If a start signal arrives and no printjob is loaded.
- If a product start error occurs, the machine stops and displays the appropriate status message.
If an I/O board or an USI is installed, the following output signals are activated (set low):
- ERROR\
 - MACHINE STATUS\
- *On:* Start errors are worked up (the printer stops!)
 - *Off:* Start errors are being ignored

Product length

Setting range	Default setting	Step width	Easy Plug
[0.0...1999.9] mm	0.0 mm	0.1 mm	#PC6017

■➡ Function for operation with product sensor.

If this function is activated, the printer ignores all start signals until the product has passed the dispensing edge

Keyboard

Settings	Default setting	Step width	Easy Plug
German, English, French, Spanish, Danish, Finnish, Swedish, Polish,	English	--	#PC2063

Setting the keyboard layout country version for standalone operation.

External signal

Settings	Default setting	Step width	Easy Plug
Off, Singlestart, Stacker fail	Off	--	#PC2042

The parameter determines, if and how an incoming signal at the - optional - single start connector will be interpreted.

- *Off:* Signal interpretation disabled.
- *Singlestart:* The signal triggers the printing of a single label. This setting may be used e.g. for printing single labels by means of a foot switch.
- *Stacker full:* The signal triggers the display of a status report and stops the printer. This setting may be used when using a stacker (= stacker full signal).

Language

Settings	Default setting	Step width	Easy Plug
German, English, French, Spanish, Dutch, Danish, Italian, Polish, Turkish, Russian, Czech, Chinese ^a , Japanese	English	--	#PC2051

a) Not all display texts are translated. Not translated texts are displayed in english.

Setting the display language.

Access authoriz.

(Access authorization)

Settings	Default setting	Step width	Easy Plug
Off, Power-up code, Operator, Supervisor, Operator auto	Off	--	#PC2053

Limits the access either to all printer functions (Power-up code) or only to the parameter menu (user or supervisor mode). Changed settings become active after the next switch-on.

- *Off*: Password interrogation switched off
- *Power-up code*: Activates the password interrogation directly after switching the printer on. After the input of a valid key code, the printer switches into offline mode. Depending on the entered key code, the printer starts in user, supervisor or production mode.
- *Operator*: Access to reduced parameter menu; contains only parameters which are necessary for daily use of the printer.
- *Supervisor*: As setting „User“, with different valid key codes:
Valid key codes: Supervisor, Production
- *Operator auto*: Printer starts without password interrogation. Only the menu Info is accessible.

Regardless when the code is prompted, can three different key codes be typed in (Tab. 4).

Entering a key code: Type the corresponding buttons of the control panel in succession. A valid key code switches the printer into the appropriate mode.

Mode	Key code	Impact
Operator	1-1-3-2	Access is limited to the Info menu
Supervisor	2-2-3-1-2-2	Access to all parameters except service parameters
Service	1-2-3-1-2-2-2	Access to all parameters

[Tab. 4] Permissible key codes.

CAUTION!

Service mode: Input errors to certain parameters can make the printer inoperable or can damage it.

→ The service code may only be applied by *trained service technicians*.

■ Especially service technicians may appreciate the possibility to force code interrogation, even if the parameter Access authoriz. is set to „Off“:

1. Switch printer off.
2. Switch printer on, simultaneously press the keys 3+4 until the input prompt „Enter Access Code!“ shows up.
3. Enter the access code.

Factory settings

Settings	Default setting	Step width	Easy Plug
No, Custom defaults, Factory defaults	No	--	

All parameters are preset ex works to values specific to each device type. These factory settings can be restored at any time.

■ All parameters are then overwritten by the factory settings.

■ All data present in the spooler, including data belonging to an interrupted print job, is deleted!

- *No*: No factory setting.

- **Custom defaults:** If custom parameter settings were stored before (see parameter System > Custom defaults), those are restored.
 ▶ „Custom defaults“ only appears, if custom settings have already been stored.
- **Factory defaults:** The parameters are set to factory defaults. After switching on, the query appears, if the setup wizard is supposed to be started (Run Setup Wizard?).

Custom defaults

Setting range	Default setting	Step width	Easy Plug
Apply current, Delete	Apply current	--	

▶ Parameter appears only in service mode.

- **Apply current:** Stores the current parameter settings as values for the default setup. Those settings are restored by calling parameter SPECIAL FUNCTION > Factory settings = „Custom defaults“.
- **Delete:** Deletes the stored custom default settings. „Delete“ is only visible, if settings have already been stored.

Turn-on mode

Settings	Default setting	Step width	Easy Plug
Offline, Online, Standalone	Online	--	#PC2020

Operating mode of the printer after it has been switched on.

- **Online:** Printer starts in online mode (display „Ready“).
- **Offline:** Printer starts in offline mode (display „Home“).
- **Standalone:** Printer starts in standalone mode.

Head resistance

Setting range	Default setting	Step width	Easy Plug
[960...1300] Ohm	--	1 Ohm	

For optimum print quality, the individual print head resistance of the thermo head employed in the device must be set once with this parameter.

When replacing the print head, the resistance value of the print head (to be read off from the print head) must be entered again.

CAUTION!

Entering a false value can damage the print head.

→ Read off the correct value from the print head and set it accordingly.

▶ The value set here remains when the factory settings are carried out.

Realtime Clock

Settings	Default setting	Step width	Easy Plug
dd.mm.yyyy hh:mm	--	--	--

Setting the realtime clock (date and time). Those data can be processed using the Easy Plug #YC, #YS or #DM commands.

Free store size

Setting range	Default setting	Step width	Easy Plug
[4096...MAX ^{a)}] KByte	4096 KByte	256 KByte	#PC2048

a) Maximum size, depends on the memory equipment and usage of the printer

By setting this parameter, a part of the memory is reserved, which the printer firmware can use if necessary (dynamic memory allocation). If this memory area is dimensioned too small, the printer firmware can not work and the error message „8856 Free store size“ shows up.

➡ The more memory is allocated using this parameter, the less memory is available for print jobs.

➡ A good advice is to increase the set value step by step, starting with the minimum of 4 MB, until the status message 8856 ("Free store size", what means the memory area is low) does no longer appear during data conversion.

Overview of the set memory areas: see parameter **Memory Status**  on page 86.

Ram disk size

Setting range	Default setting	Step width	Easy Plug
[128...MAX ^{a)}] KBytes	512 KBytes	128 KBytes	#PC2046

a) Maximum size, depends on the memory equipment and usage of the printer

A part of the printer memory can be identified as a RAM disk. The RAM disk can be used in the same way as the Compact Flash Card, e.g. for storage of logos or fonts.

With the parameter Ram disk size, the customer can set the size of the RAM disk to his needs. Be aware, that RAM disk memory is not available for print picture buildup. Use of much RAM disk memory reduces the picture buildup rate of the printer.

➡ Switching the printer off extinguishes the memory content! Fonts, logos etc., which were loaded on the RAM disk, must be loaded again after switching the printer off.

Overview of the set memory areas: see parameter **Memory Status**  on page 86.

Font downl. area

Setting range	Default setting	Step width	Easy Plug
[128...MAX ^{a)}] KByte	256 KByte	128 KByte	#PC2047


a) Maximum size, depends on the memory equipment and usage of the printer

If speedo-fonts are supposed to be used, they have first to be copied to a reserved RAM disk area. Use parameter „Font downl. area“ to reserve the RAM disk area in the required size.

The size of the required RAM disk area depends on the size of the font files to be loaded.

➡ Mind to reserve a big enough RAM disk area!

There are two ways to copy the font files to the RAM disk:

- Copy from external storage medium:
The font files must be placed in a folder named `\fonts` on the storage medium during system startup. The files must be named `fontxxx.spd` (xxx = No. from 200 up to 999).
See chapter **Fonts directory**  on page 133.
- Copy via Easy Plug command #DF
See Easy Plug manual, topic section „Description of Commands“

➡ Switching the printer off extinguishes the memory content! Fonts, logos etc., which were loaded on the RAM disk, must be loaded again after switching the printer off.

Spooler size

Setting range	Default setting	Step width	Easy Plug
[16...2048] KByte	64 KByte	16 KByte	#PC1104

The memory capacity of the printer buffer can be set according to the requirements of each customer.

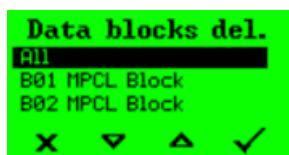
Data blocks del.

(Delete data blocks)

Settings	Default setting	Step width	Easy Plug
All, Bxx	All	--	

Only appears, if at least one data block is in the flash memory.

- *Bxx*: The selected data block number xx is deleted:



„B01“: Block number 01

„MPCL Block“: Name of the data block, is contained in the data block header.

- *All*: All data blocks in the flash memory are deleted.

Miss. label tol.

(Missing label tolerance)

Setting range	Default setting	Step width	Easy Plug
[0...50]	2	1	#PC2029

The maximum search path for gaps which cannot be found can be varied. In cases of difficult gap detection (i. e. minimum variation in the light transparency, gap to label), shortening the search path is to be recommended. Label loss resulting from gaps not being detected can be reduced in this way. Printing does not take place during the search process.

- Example 0 (Zero label length):
A gap must be found after a printed label otherwise an error message is given. This setting is for detecting every missing label.
- Example 5 (Five label lengths):
A gap must be found after a maximum of 5 label lengths otherwise an error message is given.

Gap detect. mode

Settings	Default setting	Step width	Easy Plug
Manual, Autom. forward	Autom. forward	--	

After one of the following events, the printer must always search for the punch, that is initialize the label material:

- *Manual*: The operator has to initialize the material the first time always manually by pressing the feed key several times.

■➡ After a change of material, the printer has to initialize the rewinder. For this reason, approx. 70 mm label material are fed forward. If the initialization is prevented (e. g. by switching off or resetting the printer), the following status message will appear after switching on next time: „5301 BLDC rewinder Ø“.

- *Autom. forward:* The material initialization is always done automatically, if necessary. There is no backward movement of the material during the initialization.

Singlestartquant

Setting range	Default setting	Step width	Easy Plug
[1...10]	1	1	#PC2033

Determines the label quantity, which will be printed after a start signal.

Reprint function

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC2050

- *Off:* Reprinting is not possible.
- *On:* The last printed label can be reprinted by pressing key 4 in online mode (display „Ready“), if the printer is not printing at that moment.

Foil end warning

Setting range	Default setting	Step width	Easy Plug
[5.0...300.0] mm	25.0 mm	0.1 mm	#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 > Foil warn stop = „Off“
- Error message, if System > Print > Foil warn stop = „On“; Furthermore, the printer stops

Also refer to parameter **Foil diameter**  on page 101.

Foil warn stop

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

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

Status:	5110
Foil low	

Error reprint

Settings	Default setting	Step width	Easy Plug
On, Off	On	--	#PC2022

If an error occurs while a label is printed, the last printed label is reprinted. For label layouts containing variable data (for example, count fields), disable the reprint function.

- *On*: Reprint in error cases
- *Off*: No reprint in error cases

Single-job mode

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC2023

In single job mode (also stop mode) the printer stops after every job and waits until the operator restarts the print process.

- *Off*: Single job mode is switched off.
- *On*: Single job mode is switched on. The printer always displays "Start next job", before starting a new print job. This requests the user to acknowledge by pressing the Online button.

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, thereby 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.

Print info mode

Settings	Default setting	Step width	Easy Plug
Par.values right, Par.values left, Compact right, Compact left	Par.values right	--	#PC2049

Structure option for info printouts.

- *Par.values right*: Setting for 100 mm material width. The parameter values are printed on the right side of the parameter names:
Parameter name: Value
- *Par.values left*: Setting for 100 mm material width. The parameter values are printed on the left side of the parameter names:
Value: Parameter name
- *Compact right*: Setting for 50 mm material width. The parameter values are printed on the right side of the parameter names:
Parameter name: Value

- *Compact left*: Setting for 50 mm material width. The parameter values are printed on the left side of the parameter names:

Value: Parameter name

Print Interpret.

Settings	Default setting	Step width	Easy Plug
Easyplug, Lineprinter, Hexdump, ZPL Emulation	Easyplug	--	#PC2012

- *Easyplug*: Printjobs written in the Easy Plug command language can be interpreted.
- *Lineprinter*: Lineprinter (or similar to Lineprinter), print-out of the print command
- *Hexdump*: Print-out in hexadecimal format.

In Lineprinter and Hex Dump, commands are printed out in the form of a list with the character set 12.

■ When setting Lineprinter or Hex Dump, Easy Plug commands which have not yet been processed are deleted!

- *ZPL Emulation*: Printjobs written in the ZPL II®¹ command language („ZPL“) can be interpreted

■ Firmware loading requires changing into EasyPlug first.

Print interface

Settings	Default setting	Step width	Easy Plug
Serial Com1, TCP/IP SOCKET, LPD server, USB, Serial Com3, Auto negotiation	Auto negotiation	--	#PC1101

This parameter sets the interface, by which the printer will receive data.

- *Serial Com1*: Serial interface Com1.
- *TCP/IP SOCKET*: Print data can be sent to the printer via a TCP/IP socket.
- *LPD server*: Print data can be sent to the printer via the LPR/LPD-protocol
- *USB*: USB interface
- *Serial Com3*: Serial interface Com3.

■ Only with optional I/O board mounted

■ election of the type of serial interface is done with parameter Print interface > Serial Port 3 > Serial port mode.

- *Auto negotiation*: All interfaces are enabled to receive data, but *not simultaneously*.

■ Don't send data to more than one interface at a time.

■ Except are interfaces, which are being used by an option (e.g. OLV)

1) ZPL II is a registered trademark of ZIH Corp.

Character filter

Settings	Default setting	Step width	Easy Plug
Chars >= 20Hex, All characters	Chars >= 20Hex	--	#PC2014

- *Chars >= 20Hex*: Filter function is activated. Characters smaller than 20H are filtered out of the data flow.
- *All characters*: Filter function is deactivated. Characters smaller than 20H are treated as normal characters.

Character sets

Settings	Default setting	Step width	Easy Plug
UTF-8, ISO 8859-2, ANSI (CP 1250), ANSI (CP 1252), IBM, Special, Norway, Spain, Sweden, Italy, Germany, France, United Kingdom, USA	IBM	--	#PC2013

Setting the character set.

- *16Bit*: UTF-8 coding
 - *8Bit*: Choose between IBM and ANSI character set.
 - *7Bit*: Additionally to the IBM and ANSI character sets, some country specific character sets are provided, which have some characters allocated differently (see table below).
- The country specific character sets are only suitable for older 7bit applications!

Decimal	35	36	64	91	92	93	94	96	123	124	125	126	>127
ASCII	#	\$	@	[\]	^	`	{		}	~	
UTF-8	#	\$	@	[\]	^	`	{		}	~	print
ISO 8859-2	#	\$	@	[\]	^	`	{		}	~	print
ANSI (CP 1250)	#	\$	@	[\]	^	`	{		}	~	print
ANSI (CP 1252) ^a	#	\$	@	[\]	^	`	{		}	~	print
IBM	#	\$	@	[\]	^	`	{		}	~	print
Special	f	¢	blank	blank	¼	½	blank	blank	«	•	»	±	blank
Norway	#	\$	@	Æ	¥	Å	^	`	æ	¢	å	~	blank
Spain	#	\$	@	i	Ñ	Ç	^	`	¿	ñ	ç	~	blank
Sweden	#	•	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	blank
Italy	Š	\$	§	°	ç	é	^	ù	à	ò	è	`	blank
Germany	#	\$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß	blank
France	£	\$	à	°	ç	§	^	`	é	ù	è	~	blank
United Kingdom	£	\$	@	[\]	^	`	{		}	½	blank
USA	#	\$	@	[\]	^	`	{		}	~	blank
blank = space, print = printable													

[Tab. 5] Country settings for applications, which base on 7bit ASCII code.

a) Covering ISO 8859-1.

EasyPlug errors

Setting range	Default setting	Step width	Easy Plug
Tolerant handl., Strict handling	Tolerant handl.	--	

Handling of errors caused by faulty Easy Plug commands.

- *Tolerant handl.*: The label is printed, after the Easy Plug/Bitimage error was acknowledged.
- *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 key 4, the display can be toggled between error message and Easy Plug command text

After acknowledging the first occurred Easy Plug error, the printjob and the spooler are deleted (as by #!CA). This prevents the printing of labels with format errors.

Spooler mode

Settings	Default setting	Step width	Easy Plug
Mult. print jobs, Single print job	Mult. print jobs	--	#PC1102

The operating mode of the spooler determines whether print series are processed individually, or whether the spooler can receive print data when printing several series.

- *Mult. print jobs*: Multiple print series mode (the interface can receive data while the series is being printed)
- *Single print job*: Single print series mode (the interface can only receive data after printing the required number of labels of a single series)

StandAlone Input

Settings	Default setting	Step width	Easy Plug
None, Serial Com1, Serial Com3, TCP/IP SOCKET	None	--	

Defines an interface for data input in standalone mode.

▮ Interfaces are only selectable, if installed and not used by another function (e. g. as data interface). If Printer Language > Print interface = „Auto negotiation“, all interfaces besides Com3 are blanked out

- *None*: No data input via interface.
- *Serial Com1*: Com1 is activated for data input in standalone mode.
- *Serial Com3*: Com3 is activated for data input in standalone mode.
- *TCP/IP SOCKET*: Ethernet interface is activated for data input in standalone mode.

#VW/I Interface

Settings	Default setting	Step width	Easy Plug
Easyplug, Serial Com1, USB, TCP/IP SOCKET, Serial Com3	Easyplug	--	

Defines the output interface belonging to the Easy Plug command #VW/I.

- *Easyplug*: Interface that is defined in INTERFACE PARA >EASYPLUGINTERPR > Print interface as input interface for print data
- *Serial Com1*: Serial interface Com 1.
 - ➡ Only available for selection, if the interface is not occupied by another function.
- *USB*: USB interface
 - ➡ Only available for selection, if the interface is not occupied by another function.
- *TCP/IP SOCKET*: Ethernet interface
 - ➡ Only available for selection, if the interface is not occupied by another function.
- *Serial Com3*: Serial interface Com 3.
 - ➡ Only available for selection, if the optional I/O board is installed and if the interface is not occupied by another function.

Printer ID no.

(Printer identification number)

Setting range	Default setting	Step width	Easy Plug
[0...31]	1	1	#PC1103

Determines the identification number of the printer. In such a way, the printer can be addressed by the Easy Plug command #!An (n=printer ID).

The use of ID numbers is in particular reasonable for data transfer by RS422/485 interface, if several printers are connected by one data line. Each of the connected printers then only incorporates the data mapped to him by #!An command.

Command sequence

Settings	Default setting	Step width	Easy Plug
#, ~	#	--	#PC5004

- „#“ is used as start sign for Easy Plug command sequences.
- „~“ is used as start sign for Easy Plug command sequences.

Manual calibrate

Settings	Default setting	Step width	Easy Plug
Yes	--	--	--

For endless material, the label length information is sent in the printjob. For punched material, the label length has to be detected by activating this function.

- **Yes**: Label length calculation for punched material.
 - ➡ Activate this function, if label material has changed.
 - ➡ Calibration should be done after changing material, when there are no printjobs loaded in the printer.
 - ➡ Shortcut (in offline mode, display „Home“): press the keys 3+4 simultaneously to activate the calibration.

Darkness

Setting range	Default setting	Step width	Easy Plug
[0...30]	15	1	--

Print contrast for ZPL printjobs. This setting is modified by printjobs which contain print contrast information. The print contrast set by **Print > Print contrast** is not influenced by this setting

Label top

Setting range	Default setting	Step width	Easy Plug
[-240...240] Dots	0	1	--

Label top offset (y-offet) in dots. Equals the parameter **Print > Y - Printadjust**, which will be ignored, when ZPL printjobs are printed

Left Position

Setting range	Default setting	Step width	Easy Plug
[-9999...9999]	0	1	--

Left position offset (x-offset) in dots. Equals the parameter **Print > X-Druckversatz**, which will be ignored, when ZPL printjobs are printed

Error Indication

Settings	Default setting	Step width	Easy Plug
Low, High, Off	Off	--	--

Selects the way, in which the printer responds in the event of error occuring during printing.

Error level	Setting		
	Off	Low	High
0	Ignore	Ignore	Ignore
1	Ignore	Ignore	Display-Anzeige
2	Ignore	Prompt user for action	Prompt user for action

Error Checking

Settings	Default setting	Step width	Easy Plug
Yes, No	Yes	--	--

Enables or disables error checking, when the printer is handling print fields.

- Yes: Error checking is enabled
- No: Error checking is disabled

Resolution

Settings	Default setting	Step width	Easy Plug
200 Dpi, 300 Dpi	300 Dpi	--	--

Print resolution in dpi. A 200 Dpi graphic printjob can be printed with a 300 Dpi print head.

Image Save Path

Settings	Default setting	Step width	Easy Plug
Drive C:, Internal RAM	Internal RAM	--	--

Selects the memory to be used by the ^IS and ^IL commands.

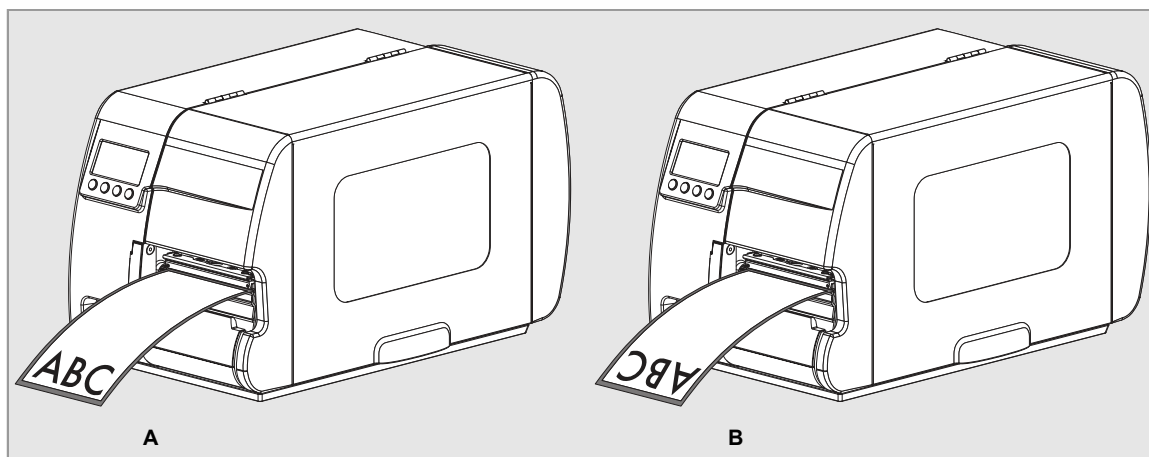
■ Interpreter Version: 1.10 or higher.

- *Drive C:*: Memory, to which „Drive C:“ points; as a standard, this is an external storage medium (SD card)
- *Internal RAM*: Internal printer memory (RAM)

Label Invert

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Disable	--	--

Rotates the printout by 180°. Equals the parameter Print > Format > Print direction, which will be ignored, when ZPL printjobs are printed



[8] Orientation of the printout: Setting „Disable“ (A) or „Enable“ (B).

- *Disable*: The label is printed with „normal“ orientation [8A].
- *Enable*: The label printout is rotated by 180° [8B].

Format Prefix

Setting	Default setting	Step width	Easy Plug
xxH	5EH ^a	--	--

a) 0x5E = „Caret“

Indicates the start of a ZPL format instruction.

Control Prefix

Setting	Default setting	Step width	Easy Plug
xxH	7EH ^a	--	--

a) 0x7E = „Tilde“

Indicates the start of a ZPL control instruction.

Delimiter Char

Setting	Default setting	Step width	Easy Plug
xxH	2CH ^{a)}	--	--

a) 0x2C = „Comma“

Used as a parameter place marker in ZPL format instructions.

Command ^PR

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

- *Disable*: The print rate sent in the ZPL printjob is ignored.
- *Enable*: The print rate is not ignored.

Command ^MT

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

- *Disable*: The material type sent in the ZPL printjob is ignored (thermo-transfer or thermo-direct).
- *Enable*: The material type is not ignored.

Command ^JM

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

■ Interpreter version: 1.32 or higher

The ^JM command changes the printer resolution:

- ^JMA sets the resolution to the default value = print head resolution.
- ^JMB sets the resolution to 200 dpi, if the actual resolution is 300 dpi. If the actual resolution is 200 dpi, this command is ignored.
- *Disable*: The resolution setting sent in the ZPL printjob is ignored.
- *Enable*: The resolution setting is not ignored.

Command ^MD/~SD

Settings	Default setting	Step width	Easy Plug
Disable, Enable	Enable	--	--

The ZPL commands ^MD and ~SD (set print head darkness value) are processed optionally.

- *Enable*: ^MD- and ~SD are processed
- *Disable*: ^MD- and ~SD are ignored

IP Addressassign

Settings	Default setting	Step width	Easy Plug
Fixed IP address, DHCP	Fixed IP address	--	#PC1501

- *Fixed IP address*: This setting activates the parameters "Net mask" and "Gateway address" (see below).

- **DHCP:** IP address is assigned automatically. The assigned IP address is displayed for a moment on the printer display, while the printer is starting.
- A change of this parameter setting forces a printer restart.

IP address

Setting range	Default setting	Step width	Easy Plug
[0...255] ^a	192.168.0.99	--	#PC1502

a) for each xxx-value in xxx.xxx.xxx.xxx

Depending on the setting of parameter **Print interface > IP Addressassign**, appears one of the following:

- an unchangeable info field (setting „DHCP“) or
- an input field (setting „Fixed IP address“) for the IP address

Net mask

Setting range	Default setting	Step width	Easy Plug
[0...255] ^a	255.255.255.0	--	#PC1503

a) for each xxx-value in xxx.xxx.xxx.xxx

Depending on the setting of parameter **Print interface > IP Addressassign**, appears one of the following:

- an unchangeable info field (setting „DHCP“) or
- an input field (setting „Fixed IP address“) for the IP address

Depending on the set IP address appears a default value.

■ EsWe recommend to use the default value!

Gateway address

Setting range	Default setting	Step width	Easy Plug
[0...255] ^a	0.0.0.0	--	#PC1504

a) for each xxx-value in xxx.xxx.xxx.xxx

000.000.000.000 = no gateway is used

Port address

Setting range	Default setting	Step width	Easy Plug
[1024...65535]	9100	--	#PC1505

Ethernet speed

Settings	Default setting	Step width	Easy Plug
Auto negotiation, 10M half duplex, 10M full duplex, 100M half duplex, 100M full duplex	Auto negotiation	--	#PC1506

- **Auto negotiation:** The communication speed is selected automatically.
- **10M half duplex:** The communication speed is set to 10 MBit/s half duplex.
- **10M full duplex:** The communication speed is set to 10 MBit/s full duplex.
- **100M half duplex:** The communication speed is set to 100 MBit/s half duplex.
- **100M full duplex:** The communication speed is set to 100 MBit/s full duplex.

DHCP host name

Setting range	Default setting	Step width	Easy Plug
--	--	--	#PC1513

Host name of the printer. Default setting: „Device name“ + the last 3 figures of the MAC address

WEB server

Settings	Default setting	Step width	Easy Plug
On, Off	Off	--	#PC1509

The web server may be used to

- read out or change parameter settings of the printer with a web browser
- operate the printer via a web browser
- The web server is not multi-session capable, what means that only one user at a time can be logged in.

Requirements for use of the web server function:

- Printer is connected to a network
- A valid IP address is assigned to the printer (by the network administrator or by a DHCP server)
- Parameter **Print interface > Network > Services > WEB server** = „On“

Starting the web server:

1. Write down the printers IP address (appears at the bottom line of the start screen, or: **Print interface > Network > Services > IP address**).
2. Start the web browser.
3. Type into the address field:
 - http://[IP address without leading zeros]
 - Example: IP address = 144.093.029.031
 - Input: http://144.93.29.31
4. Click „Login“.
5. Type in user name (admin) and password (admin).

If the login was successful, you will find the following menu items at the left window margin:

Menu item	Function
Home	Jumps to the home page.
Logout	Interrupts the connection to the printer.
Parameter	Opens the parameter menu. By clicking on submenus and parameters, those can be opened and the parameter settings be changed. Some parameters force the printer to reset, if their setting is modified by means of the operation panel. If the parameters are changed via the web server, this doesn't happen automatically. Therefore, the modifications only become effective after the next printer restart. A restart can be triggered remote in the „Display view“.
Display view	Opens the display operation panel. Enables remote operation of the printer.
Download	Opens another browser window with the URL of the FTP server. For more information read the description of Print interface > Network > Services > FTP Server
Help	Help texts

[Tab. 6] Functions of the web server.

- *On*: Switches the web server on.
- *Off*: Switches the web server off.

WEB display refr

(Web server display refresh)

Setting range	Default setting	Step width	Easy Plug
[0...20] s	5 s	1 s	#PC1510

■ Only appears, if Print interface > Network > Services > WEB server = „On“.

Automatic updating of the web browser display. The setting determines the time in seconds between two updates.

■ Setting 0 = „no automatic updating“.

FTP server

Settings	Default setting	Step width	Easy Plug
On, Off	Off	--	#PC1507

The File Transfer Protocol (FTP) server (RFC959) allows access to the internal RAM disk of the printer and, if available, to the memory card. The FTP server is capable of multisesion mode, without evaluating the user name when logging in. The password must match the set password (see below).

- *On*: Switches the FTP server on.
- *Off*: Switches the FTP server off.

Time client

Settings	Default setting	Step width	Easy Plug
Off, On	Off	--	#PC1529

Loads the current time from a time server.

- *Off*: The time client is switched off.
- *On*: The time client is switched on. The time is loaded with the frequency set under Sync. interval from a time server with the IP address Time server IP

If there is no valid time server response within 2 s after system start, an error message appears:

Status num: 9040
No Time Server



With the time client service, the current date and time can be obtained from a time server using RFC868 time protocol on UDP port 37. For this purpose, a time server IP address needs to be given. Date and time are initially requested at start up an optional in a setable update interval during operation time. It is also stored in the internal real time clock. There is no time offset or daylight saving hour, so the server time must exactly match the local time of the printer.

Time zone

Setting range	Default setting	Step width	Easy Plug
[-12:00...+12:00]	00:00	00:30	#PC1533

Correction of the time received by the time server by a value expressed in hours (hh) and minutes (mm).

➡ Only appears if Print interface > Network > Services > Time client = „On“.

Baud rate

Setting range	Default setting	Step width	Easy Plug
2400 Baud, 4800 Baud, 9600 Baud, 19200 Baud, 38400 Baud, 115200 Baud	115200 Baud ^a 9600 Baud ^b	--	#PC1201 ^a #PC1351 ^b

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

Speed of data transfer using the serial interface.

No. of data bits

Settings	Default setting	Step width	Easy Plug
[7..8]	8	1	#PC1202 ^a
8	8	--	#PC1353 ^b

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

Parity

Setting range	Default setting	Step width	Easy Plug
Odd, Even, None, Always zero	None	--	#PC1203 ^a
Even, None	None	--	#PC1354 ^b

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

Defines the parity check of serial transmitted data.

The parity bit is for checking data transmission. If the check shows an error, a corresponding message is displayed. The setting must be identical at the sender and the receiver. Normally transmission is set without a parity bit.

- *Odd*: A parity bit is added so that there is an odd number of 1 Bits.
- *Even*: A parity bit is added so that there is an even number of 1 Bits.
- *None*: Sending and receiving without check bit.
- *Always zero*: Check bit is always 0 (zero). Sending and receiving without parity check.

Stop bits

Settings	Default setting	Step width	Easy Plug
[1..2]	1	--	#PC1204 ^a
2	2	--	#PC1355 ^b

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

Data synch.

Setting range	Default setting	Step width	Easy Plug
RTS/CTS, XON/XOFF, None	RTS/CTS	--	#PC1205 ^a
			#PC1356 ^b

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

Data synchronisation at the serial interface

- *RTS/CTS*: Data synchronisation through hardware
- *XON/XOFF*: Data synchronisation through software
- *None*: Handshake signals are ignored

Serial port mode

Settings	Default setting	Step width	Easy Plug
RS232, RS422, RS485	RS232	--	#PC1206 ^a
			#PC1357 ^b

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

- *RS232*: Sets the serial interface to RS 232.

Data synchronisation may be done by hardware (RTS/CTS) or by software (XON/XOFF). Maximum cable length is 15 m.

- *RS422*: Sets the serial interface to RS 422.

RS 422 is a 4 wire point to point connection, suitable for only one device. Receiver and driver of the printer are always enabled. Data synchronization is only possible by software (XON/XOFF). Maximum cable length is 1 km with twisted telecommunication cable.

- *RS485*: Sets the serial interface to RS 485.

RS 485 is a 2 or 4 wire bus system for up to 30 devices. The printer's receiver is always enabled, the printer's driver is only enabled, if the printer sends data to the host. Data synchronization is only possible by software (XON/XOFF). Maximum cable length is 1 km with twisted telecommunication cable.

Frame error

Settings	Default setting	Step width	Easy Plug
Display, Ignore	Display	--	#PC1207 ^a #PC1358 ^b

a) Print interface > Serial Port 1 > Baud rate

b) Print interface > Serial Port 3 > Baud rate (only with I/O board)

- *Display*: An error message is displayed, if a framing error is detected while the printer is receiving serial data.
- *Ignore*: Framing errors will be ignored, no error messages are displayed.

Drive C

Settings	Default setting	Step width	Easy Plug
None, SD card, <N.N.>	SD card	--	#PC1600

Assigns the drive letter C with a connection for external data carrier.

- *None*: C is not assigned
- *SD card*: Assigns drive letter C to the SD card slot.
- *USB thumb drive*: Assigns drive letter C to the connector for USB thumb drive.

Drive D

Settings	Default setting	Step width	Easy Plug
None, SD card, <N.N.>	<N.N.>	--	#PC1601

Verknüpft den Laufwerkbuchstaben D mit einem Anschluss für externe Datenträger.

- *None*: D is not assigned
- *SD card*: Assigns drive letter D to the SD card slot.
- *USB thumb drive*: Assigns drive letter D to the connector for USB thumb drive.

Store Parameters

Settings	Default setting	Step width	Easy Plug
Without adj. par, With adjust para	Without adj. par	--	--

Parameter settings are saved in a text file on memory card (directory FORMATS\). Considered are also parameters which belong to options, which are not activated.

- *Without adj. par*: Parameters, which contain device specific settings, are *not* saved. (Default file name: SETUP.FOR).

Application example: Transfer of printer settings to another printer (device specific settings as print head resistance or sensor settings should not be overwritten).

- *With adjust para*: Parameters, which contain device specific settings, are *also* saved. The relevant parameter names are marked with a * in the text file.

(Default file name: SETUPALL.FOR).

Application example: Service

Gen.Support Data

(Generate support data)

Generates the folder „SupportData“ on the selected memory medium and stores the following diagnosis files therein:

- Setup.for (for details see Tools > Diagnostic > Store Parameters)
- SetupAll.for (for details see Tools > Diagnostic > Store Parameters)
- Diagnose.log

Each of the file names is completed by the printer type and the serial number of the CPU board. The file content is english, regardless of the language setting at the printer.

Those data are very helpful for the technical support for fault diagnosis purposes.

EasyPl. file log

(Easy Plug file log)

Settings	Default setting	Step width	Easy Plug
Off, All data, Interpreter data	Off	--	#PC5005

■ Only visible, if a memory card is inserted.

■ Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

■ Activating this parameter may cause error messages, which may be difficult to understand. Therefore disable the function after error analysis. If an error occurs, disable the function and restart the printer.

- *Off*: The file log function is switched off.
- *All data*: All received data, including immediate commands, are written into the log file.
- *Interpreter data*: All data is written into the log file, which the Easy Plug interpreter reads out of the reception spooler. Immediate commands are *not* included.

Log files delete

(Logdatei löschen)

Settings	Default setting	Step width	Easy Plug
No, Yes	No	--	--

■ Only visible, if a memory card is inserted.

- *No*: No function.
- *Yes*: Deletes all log files on the inserted memory card, which fulfil the following conditions:
 - Filename matches the scheme „EPxxxxxx.log“
xxxxxx = number from 1 to 999999, preceding digits filled with „0“. Example: „EP000001.log“.
 - Location: folder \LOGFILES on memory card
Those conditions are matched by logfiles, which are automatically generated by Tools > Diagnostic > EasyPl. file log.

EasyPlug Monitor

Settings	Default setting	Step width	Easy Plug
Off, Serial Com1	Off	--	#PC5113

Parameter only appears in service mode.

The parameter activates the logging of received Easy Plug data. Data is transmitted to the serial interface (Com1).

- *Off*: The monitor function is disabled.
- *Serial Com1*: The Easy Plug monitor data is transmitted to the serial interface (Com1).

Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

To keep the influence of the monitoring function on the data rate as low as possible, the baud rate should be set to 115,000!

EP Monitor Mode

Settings	Default setting	Step width	Easy Plug
Interpreter data, All data	Interpreter data	--	#PC5125

Parameter only appears in service mode.

Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

- *Interpreter data*: All received Easy Plug data, apart from immediate commands, are transmitted.
- *All data*: All received Easy Plug data, including immediate commands, are transmitted.

Sensor Test



Instructions for the sensor test can be found in chapter **Sensor test** on page 94.

Cutter test

Makes it possible to test the cutter function without having to set the parameter Options > Selection > Periph. device to „cutter“.

Triggers a cut, if a cutter is installed. Without a cutter nothing will happen.

Memory card test

Pressing the online button starts a test routine for the Compact Flash Card memory. The following display shows up after successful testing:

Memory card test
Card Test O.K.

If the memory card is defective or not available, a corresponding error report shows up.

For test purposes, the printer creates a file named TESTXXXX.TXT in the root directory of the card. An already existing file with this name will be overwritten.

Print test

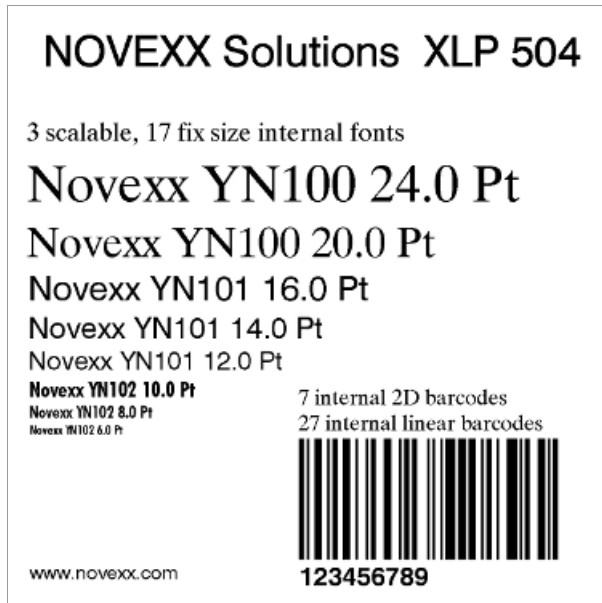
General printtest, prints line by line the set printer type and the firmware version. Material settings (Material type, length, width) are considered.

Model ID

Displays printer type and print head resolution.

Demo label

Prints a demonstration label in format 100 mm x 100 mm that is especially sized for the demo foil and demo material, which is supplied temporarily.



[9] Printout „Demo label“.

Printer Status

A protocol can be printed to get an overview of customer-specific parameter settings [10].

A material width of 100 mm is necessary to print the reports. The status print-out is approx. 200 mm long.

Which parameters are listed, depends on the printer type and configuration.

Printer Status	Printer Status	Printer Status	Printer Status
Printer type : XLP 504 3 Printhead type : KPA 300 C System version : V7.70 Aug 22 20	Printer Status <hr/> > Selection <hr/> Periph. device : Intern Rewind <hr/> > I/O Board <hr/> Start print mode : Pulse falling Reprint signal : Off Feed input : Off Pause input : Off Error output : Printer error Error polarity : Level low acti Status output : Low ribbon wa Status polarity : Level low acti End print mode : Mode0 inactiv <hr/> > Internal Rewinder <hr/> Rewind direction : Printing outsi <hr/> System <hr/> Language : English Access authoriz. : Off Turn-on mode : Online <hr/> > Hardware Setup <hr/> Head resistance : 1202 Ohm Head-sensor dist : 0 mm <hr/> > Memory <hr/> Free store size : 4096 KBytes Ram disk size : 512 KBytes Font downl. area : 256 KBytes Spooler size : 64 KBytes <hr/> > Print <hr/> Miss. label tol. : 2 Gap detect. mode : Autom. forwar Singlestartquant : 1	Printer Status <hr/> Reprint function : Off Foil end warning : 20.0 mm Foil warn stop : Off Error reprint : On Single-job mode : On Temp. reduction : 20 % Print info mode : Par.values right <hr/> Printer Language <hr/> Print Interpret. : ZPL Emulation <hr/> > EasyPlug Setting <hr/> Character filter : Chars > = 20Hex Character sets : Germany EasyPlug errors : Strict handling Spooler mode : Mult. print jobs StandAlone Input : None #VW/I Interface : Easyplug Printer ID no. : 1 Command sequence : '#' <hr/> > ZPL Setting <hr/> Darkness : 15 Label Top : 0 Dots Left Position : 0 Dots Error Indication : OFF Error Checking : YES Resolution : 300 DPI Image Save Path : Internal RAM Label Invert : Disable <hr/> > > Commands <hr/> Format Prefix : 5EH Control Prefix : 7EH Delimiter Char : 2CH Command ^PR : Enable Command ^MT : Enable Command ^JM : Enable Command ^MD/-SD : Enable	Printer Status <hr/> Interface <hr/> Print interface : USB <hr/> > Network <hr/> IP Addressassign : DHCP IP address : 10.220.1.179 Net mask : 255.255.254.0 Gateway address : 10.220.0.1 Port address : 9100 Ethernet speed : Auto negotiation DHCP host name : XLP504_300dpi_071 <hr/> > > Services <hr/> WEB server : On WEB display refr : 5 s FTP server : On Time client : Off Time server IP : 130.133.001.010 Time zone : +0:00 <hr/> > Serial Port 1 <hr/> Baud rate : 115200 Baud No. of data bits : 8 Parity : None Stop bits : 1 Bit Data synch. : RTS/CTS Serial port mode : RS232 Frame error : Display <hr/> > Serial Port 3 <hr/> Baud rate : 9600 Baud No. of data bits : 8 Parity : None Stop bits : Automatic Data synch. : RTS/CTS Serial port mode : RS232 Frame error : Display

[10] Printout „Printer Status“.

Memory Status

Prints an overview over:

- Internal Memory Configuration [11A]
- Files that are stored on the internal memory (RAM disc) [11B]
- Files that are stored on an external memory medium [11C] (if any)

➡ The entries differ depending on printer type and configuration.

The screenshot shows a 'MEMORY STATUS' printout. Annotations are as follows: 'C' points to the top section (Space for spooler, Space for RAM disc, Font downl. area, Free store size). 'A' points to the 'Logos on RAM disc' and 'Graphics on RAM disc' sections. 'B' points to the 'Easyplug formats on Memory Card (C:)' section, specifically to the list of files and their sizes.

MEMORY STATUS	
Space for spooler	: 64 KB
Space for RAM disc	: 508 KB
Font downl. area	: 256 KB
Free store size	: 4096 KB
Logos on RAM disc	
Graphics on RAM disc	
Easyplug formats on Memory Card (C:)	
A_Testetikett_01.for	334 Bytes
C_Testetikett_03.for	334 Bytes
D_Testetikett_04.for	334 Bytes
E_Testetikett_05.for	334 Bytes
F_Testetikett_06.for	334 Bytes
G_Testetikett_07.for	334 Bytes
H_Testetikett_08.for	334 Bytes
I_Testetikett_09.for	334 Bytes
B_Testetikett_02.for	329 Bytes
novexx.for	170 Bytes
SETUP XLP 504 300 Dpi A10014909:500004.FOR	24396 Bytes
Logos on Memory Card (C:)	
Graphics on Memory Card (C:)	

[11] Printout „Memory Status“.

Font Status

Print samples of all installed characters, bar codes and line samples (several pages):

- Page „Font / Line Library“ shows a list of the internal fonts [12] and line styles [13].
- The pages titled „Barcode Library“ show print samples of the internal bar codes [14].

Internal fonts:

→ Use the font numbers listed in the first column [12] together with an Easy Plug command for text output (e. g. #YT), to print using the appropriate font.

Easy Plug commands: Refer to the Easy Plug Manual, topic section “Command description”.

FONT / LINE LIBRARY		
Number of Fonts : 22 (internal)		
Font No.	High	Font Sample
98	0.67	0123456789ABCDEFGHIJKLMNPQRSTUVWXYZ
99	0.75	0123456789ABCDEFGHIJKLMNPQRSTUVWXYZ
100	0.83	0123456789ABCDEFGHIJKLMNPQRSTUVWXYZ
101	1.33	0123456789ABCDEFGHIJKLMNPQRSTUVWXYZ
102	1.50	0123456789ABCDEFGHIJKLMNPQRST
103	2.00	0123456789ABCDEFGHIJKLMN
104	2.92	0123456789ABCDEF
105	1.50	0123456789ABCDEFGHIJKLMNPQR
106	2.00	0123456789ABCDEFGHIJKL
107	2.92	0123456789ABCDE
108	3.25	0123456789ABCDEF
109	5.16	0123456789
110	2.75	0123456789ABCDE
111	1.41	0123456789ABCDEFGHIJKLMNPQRST
112	1.92	0123456789ABCDEFGHIJKLM
113	1.92	0123456789ABCDEFGHIJKLMN
114	2.33	0123456789ABCDEFGHIJ
115	2.33	0123456789ABCDEFGHIJ
116	2.38	0123456789ABCDEFGHIJ
100	40 P	0123456789ABCDEF
101	40 P	0123456789ABCDEF
102	40 P	0123456789ABCDEF

Only with
600 dpi

[12] Printout „Font Status“: List of the internal fonts in section „Font / Line Library“. The fonts with the numbers 98 and 99 are only available in printers with 600 dpi resolution.

Internal Line Styles:














→ Use the line style number (first column [13]) with one of the Easy Plug commands #YL or #YR to print lines in the matching style.

Easy Plug commands: Refer to the Easy Plug Manual, topic section “Command description”.

Additionally, the following line styles are available:

- 13: Checked pattern with 3 dot edge length
- 14: Checked pattern with 1 mm edge length
- 15: Checked pattern with 5 mm edge length







































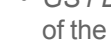
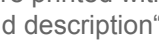





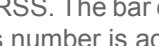

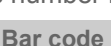


➡ The line width has to be defined as a multiple of the edge length of the checked pattern!

FONT / LINE LIBRARY	
Line Style	Line Sample
Typ 0	
Typ 1	
Typ 2	
Typ 3	
Typ 4	
Typ 5	
Typ 6	
Typ 7	
Typ 8	
Typ 9	
Typ 10	
Typ 11	
Typ 12	

[13] Printout „Font Status“: List of the internal line styles in section „Font / Line Library“.

Internal bar codes:

The pages titled „Barcode Library“ show print samples of the internal bar codes [14], [15].

BARCODE LIBRARY			BARCODE LIBRARY			BARCODE LIBRARY		
Number of Barcodes : 31 (internal)								
Barcode No.	Barcode Sample		Barcode No.	Barcode Sample		Barcode No.	Barcode Sample	
0		EAN 8	14		MS	27		CODE 128 Pharmacy
1		EAN 13	15		EAN 128/ISS1-12			0000000000000000
2		UPCA	16		CODE 39 (3:1)			
3		CODE 93	17		Frachtpostzentrum 99			
4		CODE 2/5 Interleave			21348.075.016.40 1			
5		CODE 2/5 Matrix			Barcode Plus AG, Frankfurt			
6		CODE 2/5 5 Striche			56.310 243.031 3			
7		CODE 39	18		CODE 128 EUPSI			
8		CODE 39			12 321 652 10 0134 0098			
9		UPCE	19		CODE 39 (2:5:1)			
10		ADD ON 2			* 1 2 3 4 5 6 7 8 9 0 *			
11		ADD ON 5	20		CODE 2/5 Interleaved Ratio (1:3)			
12		ITF			12 3 4 5 6 7 8 9 0			
13		CODE 128	21		CODE 2/5 Matrix Ratio (1:2.5)			
					1 2 3 4 5 6 7 8 9 0			
			22		CODE 2/5 Matrix Ratio (1:3)			
					1 2 3 4 5 6 7 8 9 0			
			23		CODE 39 Extended			
					* 1 2 3 4 5 6 7 8 9 0 *			
			24		CODE 128 A			
					1234567890			
			25		CODE 128 B			
					1234567890			
			26		CODE 128 C			
					1234567890			

[14] Print sample „Font Status“, section „Barcode Library“.

- *Onedimensional bar codes* are printed with the Easy Plug command #YB, see manual Easy Plug, topic section „Command description“.
- *Two-dimensional bar codes* are printed by means of special Easy Plug commands (Tab. 7).
- *GS1 DataBar* (formerly RSS) and *Composite Component* (CC) bar codes are printed by means of the Easy Plug command #RSS. The bar code is determined by the number in the first column of the subsequent table. This number is added to the command as a parameter.

Easy Plug command	Bar code
#IDM	Data Matrix Code
#MXC	Maxi Code
#PDF	PDF 417
#CBF	Codabar F
#CFN	Code 49
#SQR	QR Matrix Code

[Tab. 7] Internal two-dimensional bar codes.

GS1 BARCODE LIBRARY			2D BARCODE LIBRARY		
EasyFlag Code	Barcode Sample		EasyFlag Code	Barcode Sample	
#RSS1		GS1 Databar Omnidir.	#DM #SDM		Data Matrix Code
#RSS2		GS1 Databar Truncated			
#RSS3		GS1 Databar Stacked			
#RSS4		GS1 Databar Stacked Omnidirectional	#MVC #SMX		Maxi Code
#RSS5		GS1 Databar Limited			
#RSS6		GS1 Databar Expanded	#PDF #SFF		PDF 417
#RSS7		UPC-A + CC-A/CC-B			
#RSS8		UPC-E + CC-A/CC-B	#CBF #SBF		Codablock F
#RSS9		EAN-13 + CC-A/CC-B			
#RSS10		EAN-8 + CC-A/CC-B	#CFN #SFN		Code 49
#RSS11		UCC/EAN-128 + CC-A/CC-B			
#RSS12		UCC/EAN-128 + CC-C	#QR		QR Code

[15] Print sample „Font Status“, section „Barcode Library“: Listing of RSS-Codes and 2-dim. bar codes.

Flashdata Status

Prints a list of all fonts stored in the flash memory. This can be e. g. customized fonts or diagnostic data.



Detailed information about *diagnosis data* can be found in the service manual, chapter „Malfunctions“ > „Reading out diagnostic data“.

FLASH DATA BLOCKS		
Total flash for data blocks	:	1856 KByte
Flash data block partition size	:	16 KByte
Number of flash data blocks	:	3
Remaining flash for data blocks	:	1344
Block 0 Diagnostics information 128 KByte		
Diagnose record 1 - created at 2016.06.16 08:20:02		
Diagnose record 2 - created at 2016.06.17 09:04:34		
Diagnose record 3 - created at 2016.06.21 10:46:24		
Block 1 Custom fonts (Scaleable) 128 KByte		
EP, Cmd	Hight	Font Sample
YN400	40p	0123456789ABC
Block 2 Custom fonts (Scaleable) 128 KByte		
EP, Cmd	Hight	Font Sample
YN401	40p	0123456789ABC
YN402	40p	0123456789ABC
YN403	40p	0123456789ABC
Block 3 Custom fonts (Scaleable) 128 KByte		
EP, Cmd	Hight	Font Sample
YN404	40p	0123456789ABC
YN405	40p	0123456789ABC

[16] Printout „Flashdata status“.

Service Status

Print the Service status report to read about operation time, no. of services, no. of exchanged parts and other matters of service interest (one page).

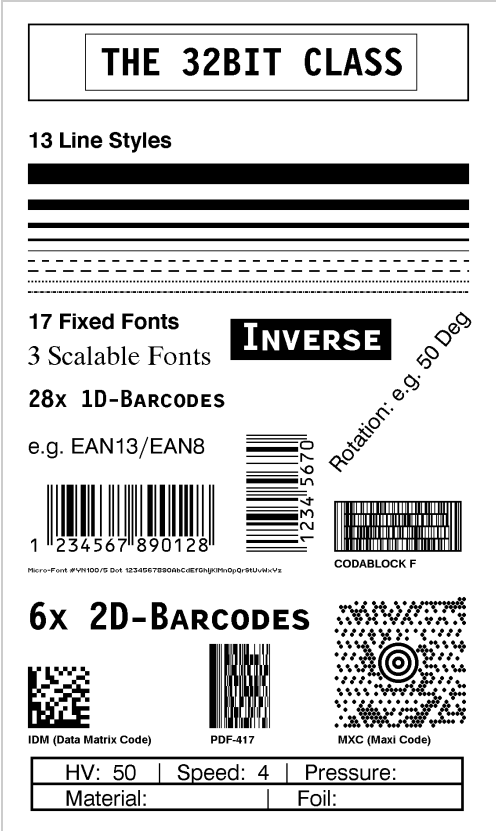
Use the parameter Tools > Service > Serv. data reset, to set all the counters to zero, which are listed on the printout.

Service Status	Service Status
Info <hr/> Model ID : XLP 504 300 Dpi <hr/> > Statistics <hr/> Head run length : 1675 m Roll run length : 1731 m Serv. operations : 1 Head number : 0 Roll number : 0 Tot. mat. length : 1731 m Tot. foil length : 293 m Head strobes : 19240259 Operation time : 0 hours 2 min Total Operation : 39 hours 31 min <hr/> > System <hr/> > > Module FW. Vers. <hr/> System version : V7.70 System revision : 10422 System date : Aug 22 2016 Bootloader : V3.90 uMon : V2.0 30Apr2015 Peripheraldriver : V 3 - T 3 Intern. rewinder : V 17 - T 36 <hr/> > > Memory Data <hr/> RAM memory size : 64 MB Flash mem size : 4 MB AMD Storage media : RAM,SD SD card : 7.50GB/8GB (c-) Space for Jobs : 45.2 MB Max. Labellength : 620 mm Custom defaults : No	<hr/> > > CPU Board Data <hr/> CPU Identifier : 2-4 PCB Revision : REV00 FPGA version : 1217 MAC Address : 00.0A.44.07.17.E5 Serial number : A100149091300004 Production date : 02.04.2009 PCB part number : A100148 Board part numb. : A100150 <hr/> > > PowerSupply Data <hr/> PS type : Blue Mountain PS Temperature : 36 °C <hr/> > > Display Data <hr/> Display Version : V4.36 Display serialNr : A108023016140009 <hr/> > Measurements <hr/> Foil diameter : 38.3 mm Head temperature : 28 °C

[17] Printout „Service Status“.

Reference label

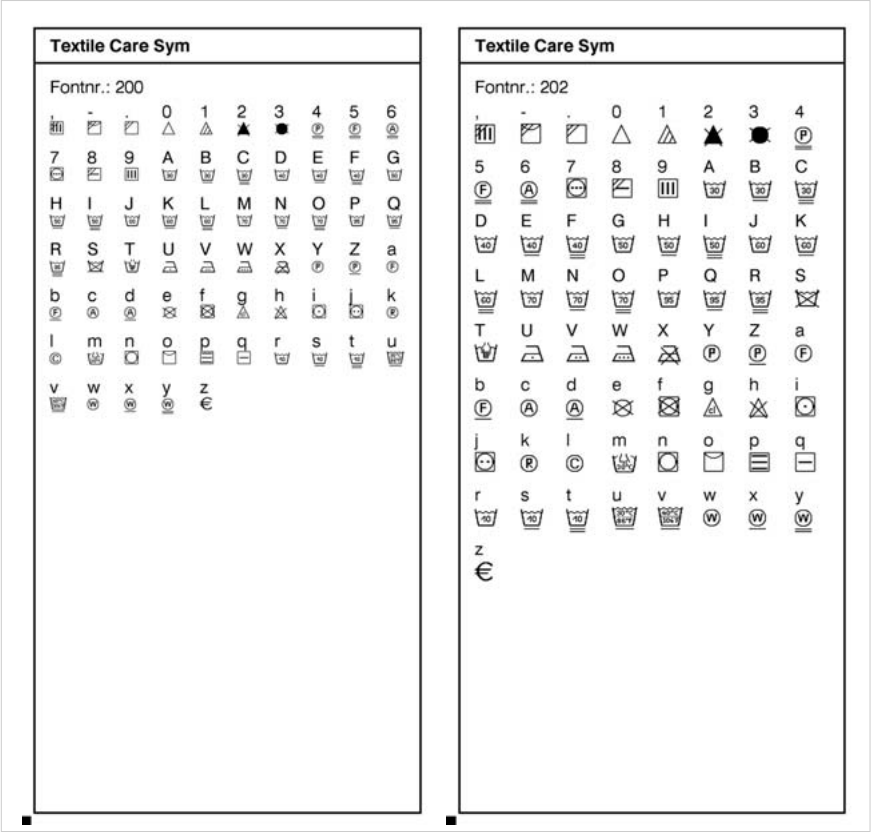
Prints a label with some examples of barcodes, fonts, logos. The table at the bottom end of the label contains the settings or print contrast and print speed, with which the label was printed. The empty fields can be filled with the applied print head pressure and the applied ribbon and label material (for purpose of comparison).



[18] Reference label printout.

Textile Care Sym

Prints the content of the internal care symbol fonts:



[19] Content of the internal care symbol fonts 200 and 202.

Head run length

No setting option - Only display	Easy Plug
	#!PG30018

Shows the total "covered distance" of the print head. The counter is reset with each calling of the parameter Tools > Service > Head exchange.

Roll run length

(Run length of the feed roller)

No setting option - Only display	Easy Plug
	#!PG30019

Shows the total "covered distance" of the print roller. The counter is reset with each calling of the parameter Tools > Service > Roller exchange.

Cuts on knife

No setting option - Only display	Easy Plug
	#!PG30020

Only with mounted and activated cutter.

Shows the number of cuts done by one knife. The counter is reset with each calling of the parameter Tools > Service > Cutter change.

Total cuts

No setting option - Only display	Easy Plug
	#!PG30023

Only with mounted and activated cutter.

Shows the total number of cuts done by one knife; other than than parameter Cuts on knife, it is not reset with cutter changes.

Service operations

No setting option - Only display	Easy Plug
	#!PG30014

Shows the number of service operations. The counter is increased by calling the parameter Tools > Service > Service done.

Head number

No setting option - Only display	Easy Plug
	#!PG30015

Shows the number of print head changes. The counter is increased by calling the parameter Tools > Service > Head exchange.

Roll number

No setting option - Only display	Easy Plug
	#!PG30016

Shows the number of exchanged print rollers. The counter is increased by calling the parameter Tools > Service > Roller exchange.

Cutter number

No setting option - Only display	Easy Plug
	

Only with mounted and activated cutter.

Shows the number of exchanged cutters. The counter is increased by calling the parameter Tools > Service > Cutter change.

Tot. mat. length

No setting option - Only display	Easy Plug
	#!PG30021

Shows the total "covered distance" of the feed roller. Other than the counter Roll run length, this counter is not reset after a roller exchange.

Tot. foil length

No setting option - Only display	Easy Plug
	#!PG30022

Shows the total "covered distance" of the ribbon roller.

Head strobes

No setting option - Only display	Easy Plug
	#!PG30025

Shows the counted head strobes, which are a measure for the service life of the print head. A strobe is counted for each line in which at least one dot ist printed.

Operation time

No setting option - Only display	Easy Plug
	#!PG30028

Shows the elapsed time since the last switch-on of the machine.

Total Operation

No setting option - Only display	Easy Plug
	#!PG30082

Shows the total operation time that is the sum of all operation times.

System version

No setting option - Only display	Easy Plug
	#!PG30004

Shows the firmware version number.

System revision

No setting option - Only display	Easy Plug
	#!PG30070

Shows a consecutive revision number.

▮▮▮ Only for factory-internal use.

System date

No setting option - Only display	Easy Plug
	#!PG30082

Shows the date, at which the firmware was generated.

Bootloader

No setting option - Only display	Easy Plug
	#!PG30061

Shows the bootloader version number.

uMon

No setting option - Only display	Easy Plug
	#!PG30062

Shows the micro monitor version number.

Peripheraldriver

No setting option - Only display	Easy Plug
	#!PG30052

➡ Only with mounted (optional) peripheral output stage board.

Applied PIC version on the output stage board driving the peripheral motor.

Intern. rewinder

(Internal rewinder)

No setting option - Only display	Easy Plug
	#!PG30057

➡ „XLP 504 peripheral with internal rewinder“ only.

Shows the applied PIC version on the internal rewinder motor output stage board.

RAM memory size

No setting option - Only display	Easy Plug
	#!PG30007

Shows the available RAM memory size.

Flash mem size

No setting option - Only display	Easy Plug
	#!PG30008

Shows the available Flash memory size. The abbreviation which is displayed behind the memory size indicates the manufacturer of the applied Flash-RAM.

Abbreviation	Manufacturer
MX	Macronix
AMD	AMD
FUJ	Fuji

[Tab. 8] The displayed abbreviations indicate the manufacturer of the Flash-RAM.

Storage media

No setting option - Only display	Easy Plug
	#!PG30081

Shows the available storage media: RAM, SD card, USB thumb drive (if any)

SD card

No setting option - Only display	Easy Plug
	#!PG30064

Shows the free memory and the total memory of the plugged-in SD card.

Representation: „XXX GB / YYY GB“ with XXX = free memory and YYY = total memory.

USB thumb drive

No setting option - Only display	Easy Plug
	#!PG30065

Shows the free memory and the total memory of the connected USB thumb drive.

Representation: „XXX GB / YYY GB“ with XXX = free memory and YYY = total memory.

Space for Jobs

No setting option - Only display	Easy Plug
	#!PG30010

Shows the memory size, which is available for print jobs.

Max. Labellength

No setting option - Only display	Easy Plug
	#!PG30011

Shows the maximum printable label length, which results from the memory allocation.

Custom defaults

No setting option - Only display	Easy Plug
	#!PG30013

There are customer specific parameter settings available that can be used for factory reset purpose. See parameter [System > Factory settings](#).

CPU identifier

No setting option - Only display	Easy Plug
	#!PG30034

Shows the designation of the applied processor.

PCB Revision

No setting option - Only display	Easy Plug
	#!PG30036

Shows the layout revision and part number of the CPU board.

FPGA version

No setting option - Only display	Easy Plug
	#!PG30037

Shows the FPGA version.

MAC Address

No setting option - Only display	Easy Plug
	#!PG30039

Shows the MAC Address, an unchanging board address, which is programmed by the board manufacturer.

Serial number

No setting option - Only display	Easy Plug
	#!PG30040

Shows the serial number that is programmed by the board manufacturer.

Production date

No setting option - Only display	Easy Plug
	#!PG30041

Shows the production date that is programmed by the board manufacturer.

PCB part number

No setting option - Only display	Easy Plug
	#!PG30042

Shows the part number of the board without components.

Board part numb.

No setting option - Only display	Easy Plug
	#!PG30043

Shows the part number of the board with components.

PS type

No setting option - Only display	Easy Plug
	#!PG30029

Shows the power supply type.

PS Temperature

No setting option - Only display	Easy Plug
	#!PG30072

Shows the current power supply temperature in °C. If for any reason the function is not supported, „??? °C“ is displayed.

Display Version

No setting option - Only display	Easy Plug
	#!PG30059

Shows the version number of the operation panel.

Display serialNr


No setting option - Only display	Easy Plug
	#!PG30068

Shows the serial number of the operation panel.

Foil rest length

Keine Einstellmöglichkeit - Nur Anzeige	Easy Plug
	#!PG30087


Shows the calculated remaining ribbon length in meter.

The parameter **System > Print > Foil end warning** can be used to set a critical length for the remaining ribbon. If the ribbon rest length equals this value, a message appears on the printer display (see **Foil end warning**  on page 67).

Foil diameter

No setting option - Only display	Easy Plug
	#!PG30026

Shows the calculated foil diameter: A measurement routine calculates the actual ribbon roll diameter with an exactness of 7.5%.

The parameter `System > Print > Foil end warning` can be used to set a critical foil roll diameter. If the foil roll diameter equals this value, a message appears on the printer display (see **Foil end warning**  on page 67).

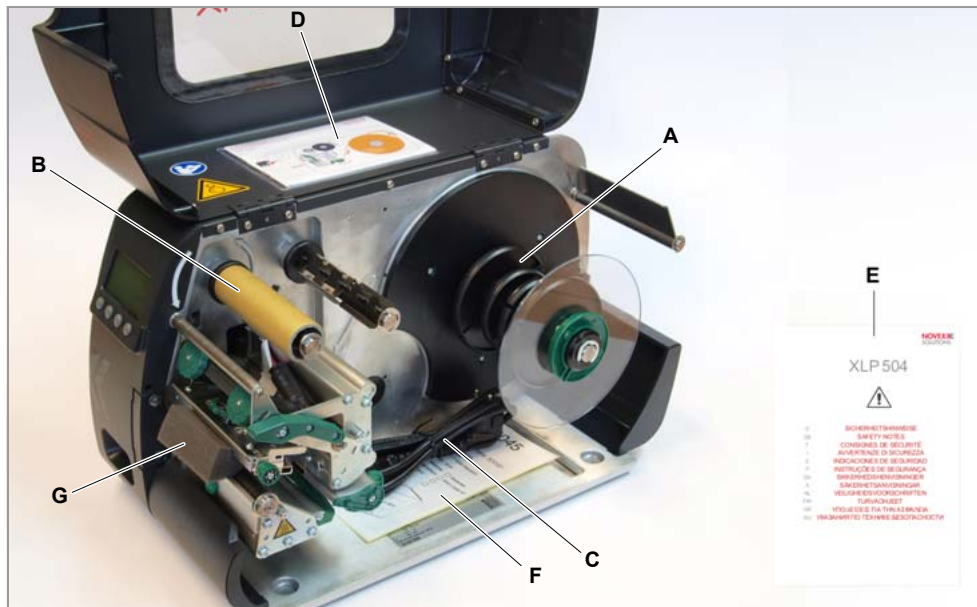
Head temperature

No setting option - Only display	Easy Plug
	#!PG30071

Shows the current print head temperature in °C

Commissioning

SCOPE OF DELIVERY



[20] Scope of delivery by the example of the XLP 504 peripheral.

- A Core adapters (2 pairs)
- B Cardboard core for rewinding thermotransfer ribbon
- C Mains connection cable
- D Quick reference guide
- E Booklet with safety notes
- F Sample printouts
- G Transportation restraint (remove before commissioning)

SETTING UP THE PRINTER



WARNING

Lethal hazard from mains power, if any liquid gets into the printer!


→ Protect the printer from liquid penetration.

CAUTION

The printer and printing materials will be damaged by moisture and wetness!

→ Only operate the printer in enclosed room, in which the ambient conditions match the values given in the technical specifications!

The setup location of the printer must match the following requirements:

- The location must be in an enclosed room.
- The ambient conditions must match the values given in the technical specifications (see chapter **Technical data**  on page 26).
- The printer must stand secure against tilting on an even surface.
- The power supply socket for the printer must be readily accessible, in order that the mains connector can be pulled in an emergency case.
- Possibility to lay all connection cables without producing any tripping hazard.
- Enough space for the operator, both, in front (operation panel) and sideways of the printer.

ELECTRICAL CONNECTIONS

Connecting to the mains power supply



WARNING!

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

- Make sure that the printer is switched off before connecting the power cable.
- Only operate the printer at the mains voltage given on the type plate.
- Only connect the printer to a grounded power socket fitted to authorised standards.

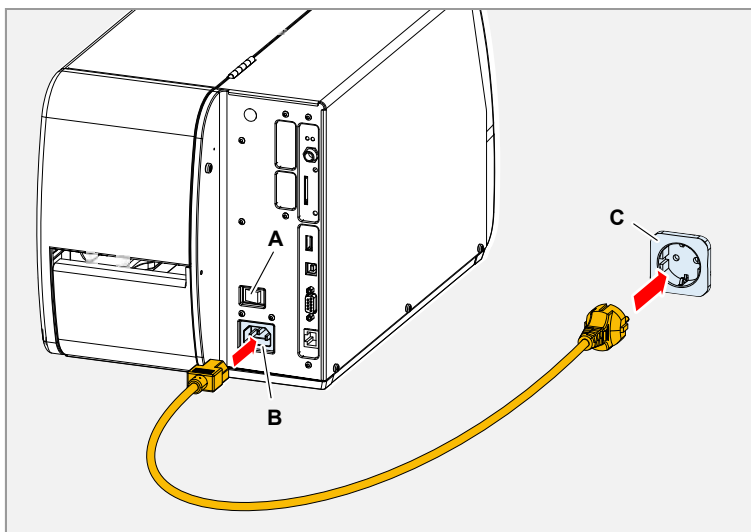
In case of danger, the printer can only be disconnected from the power supply by removing the power plug from the power supply.

- Make sure that the power supply socket for the printer is readily accessible.

Risk of stumbling over cables.

- Lay the power cable and data cables in a way that nobody can stumble over it.

1. Ensure that the machine is switched off (mains power switch [21A] in position "0").
2. Connect the machine to a mains power socket [21C] using the provided power cable.



[21] Connecting the power cable.

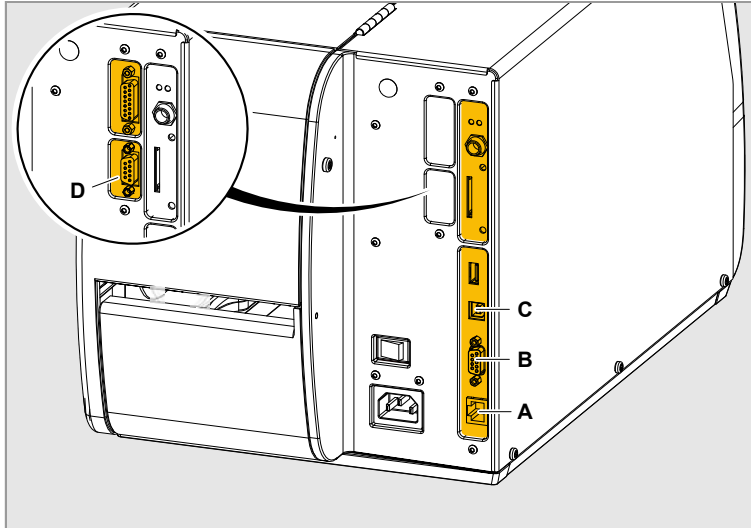
Connecting to a data host

In ex-factory status, the XLP 50x is set for data transfer via USB interface. Alternatively, print data can be transferred via serial interface or Ethernet interface [22].

Connecting:

→ Connect a commercially available data cable matching the selected interface to the printer and to the data host.

For information about setting the data interface read chapter **Selecting a data interface** on page 108.



[22] Data interfaces at the XLP 50x (pictured: XLP 504).

- A Ethernet
- B RS 232
- C USB
- D RS 232/422/485 (optional)

Alternatively to transmitting via data line, the printjobs can be stored on a storage medium (SD card, USB thumb drive) and be started from there.

SWITCHING ON/OFF



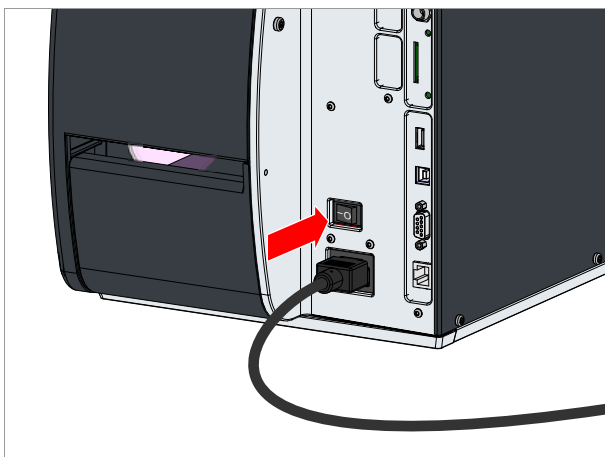
WARNING!

Only by disconnecting the plug from the mains supply is the printer fully disconnected from the supply. Therefore:

- Keep mains connection freely accessible.
- In case of danger switch off the printer and unplug the power cable.

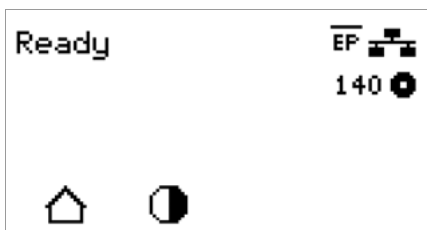
Switching on:

- Move the mains power switch of the printer to "I" (On) [23].



[23] Mains power switch at the XLP 50x.

The machine starts up. Afterwards the machine is in online mode. Display:



For details about the display during starting-up see chapter [Display during startup](#) on page 21.

Switching off:

- Move the mains power switch of the printer to "O" (Off).

CAUTION!

Risk of malfunctions caused by switching on/off too quickly.

- Wait at least 10 seconds between switching the printer off and on again, otherwise any modified parameter settings are not saved!

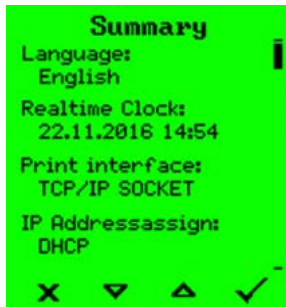
The printer shuts down.

BASIC SETTINGS

The setup wizard

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 opened sequentially. Which parameters are opened depends among other on the settings in the preceding parameter. A final step shows a summary of the settings [24], which has to be acknowledged by pressing a key.



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

If „No“ is selected after the initial query, the setup wizard does not start and the parameters for the basic settings have to be called and set manually (see following chapters).

Language setting operation panel

To change the language of the display texts:

→ Call System > Language and select the desired language.

Available languages: German, English, French, Spanish, Dutch, Danish, Italian, Polish, Turkish, Russian, Czech

Setting the realtime clock

→ Call System > Hardware Setup > Realtime Clock:



→ Set date/time. The keys have the following functions:

Key	Function
→	Select the input field on the right
+	Increase/decrease the value in the input field
-	
✓	Apply the setting (appears, if the last input field is active)
✗	Cancel

Selecting a data interface

The interface type is selected with parameter `Print interface > Print interface`.

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

- Settings for the serial interface (Com 1 or Com 3 ¹⁾): `Print interface > Serial Port 1` or `Print interface > Serial Port 3`.
- Settings for the Ethernet interface: `Print interface > Network`.

For details about *data transmission* read chapter **Transferring a print job**  on page 129.

Switching the rewind function on/off

Prerequisites


- ➡ Only for XLP 50x with internal rewinder and baffle plate.
- ➡ Insert label material before activating the rewinder, otherwise an error message will appear!

Switching on

➔ Set `Options > Selection > Periph. device` to „Intern. rewinder“.

➡ Don't confuse with the setting „Rewinder“, which activates the external rewinder (accessory)!

The printer restarts. Afterwards, the following has changed:

- An additional submenu `Options > Internal Rewinder` appeared, which contains the parameter `Rewind direction`. By this, the rotation direction of the rewinder can be reversed.
- The icon  is visible above key 3. By pressing this key, the rewinder can be stopped and started.

Switching off

➔ Set `Options > Selection > Periph. device` to „None“.

Switching the dispense function on/off


Prerequisites

- ➡ Only for XLP 50x with internal rewinder and dispensing edge
- ➡ Insert label material before activating the rewinder, otherwise an error message will appear!

Switching on

➔ Set `Options > Selection > Periph. device` to „Dispenser“.

The printer restarts. Afterwards, the following has changed:

- An additional submenu `Options > Dispenser` appeared, which contains the parameters that are required to set the dispensing process.
- The icon  is visible above key 3. By pressing this key, the rewinder can be stopped and started.

Switching off

➔ Set `Options > Selection > Periph. device` to „None“.

1) Wenn die optionale zweite serielle Schnittstelle eingebaut ist.

Setting the dispense function

Setting the stop position

The label should be dispensed to that a narrow strip still sticks to the backing paper above the dispensing edge.

→ Set Options > Dispenser > Dispenseposition to -6.0 mm (= default setting; for strong adhesives, this may have to be reduced to -8.0mm).

Using the dispensing edge sensor as trigger

The sensor at the dispensing edge switches, if a dispensed label is taken off the dispensing edge. The next label is printed and dispensed immediately.

→ Set Options > Dispenser > Start source to „Light barrier“.


Using a foot switch as trigger

After pressing the connected foot switch, a label is printed and dispensed. Afterwards, the printer waits for the next signal.

→ Set Options > External signal to „Singlestart“.

→ Set Options > Dispenser > Start source to „Foot switch“.

Using key 1 on the operation panel as trigger


After pressing key 1 on the operation panel (symbol ) , a label is printed and dispensed. Afterwards, the printer waits for the next signal.

→ Set Options > External signal to „Singlestart“.

→ Set Options > Dispenser > Start source to „Foot switch“.

Label length < 40 mm

If very short labels are to be printed (Print > Material > Material length is set to <40mm), the printer is automatically initialised for the material before printing.

For more information, see the parameter description Options > Dispenser > Calibration mode in chapter **Parameter menu**  on page 34.

Operation

CHOOSING THE MATERIALS

Label Material

Material specification

The XLP 50x can process rolls as well as leporello fold (= fold-out or accordion fold material).

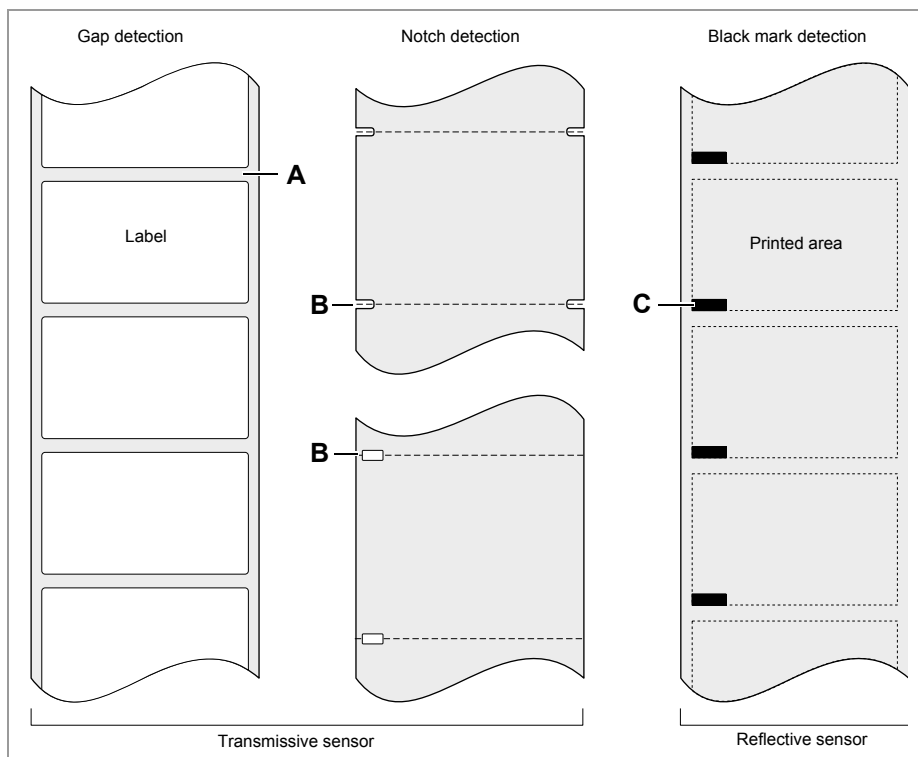
▮ The label rolls must be wound with the printable side facing outwards.

For more information on the material specifications, refer to chapter **Label Stock** on page 30.

Punches/reflex marks

In general, one distinguishes between converted and unconverted material.

- The start of each label is usually marked on converted material. With self-adhesive labels, this can be a gap [25A] between the labels or, with cardboard labels, a small punch [25B] on the edge. If the printer is equipped with the optional reflex sensor, it will be able to detect reflex markings [25C] on the rolls.
- Unconverted material is referred to as “continuous form material” and does not have any label markings. The length of the label is determined through the length setting in the Parameter menu.



[25] Various types and positions of “start of label” markings.

Quality criteria

Pay attention to the following 3 factors when selecting the quality of label material:

- The abrasive behaviour of the surface structure of the material
- The chemical properties of the material that affect how ink is printed
- Temperature required for ink transfer

Abrasiveness

If the material is very rough (= strong sanding effect), the printhead will wear down more quickly than with smooth material. This is an important aspect of thermal printing. With thermal transfer printing, this does not pose much of a problem because you can select a ribbon that is wider than the material.

Cleaning the printhead

Similarly, excessively high printhead temperatures can also cause problems. The material and the ribbon require more time to cool down, the printing quality becomes more critical and the printhead will wear down more quickly.

Thermal Transfer Ribbon

We recommend the following for ribbons:

- The ribbon must have a anti-static back coating with low friction.
- The ribbon must be designed for “Flat Head” printheads.
- The ribbons must be able to handle winding speeds up to the following limits:
 - (XLP 504) 250 mm/s (10 Inch/s)
 - (XLP 506) 200 mm/s (8 Inch/s)

CAUTION!

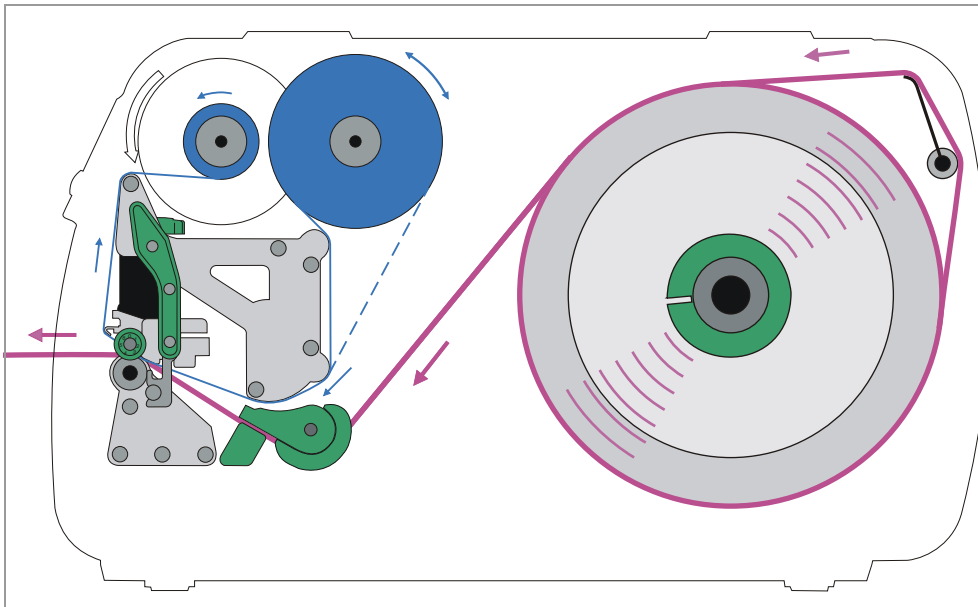
Ribbons that do not have these properties can reduce the printer performance and damage the printhead!

INSERTION DIAGRAMS

These diagrams display how the material and ribbon moves through the printer under the following conditions:

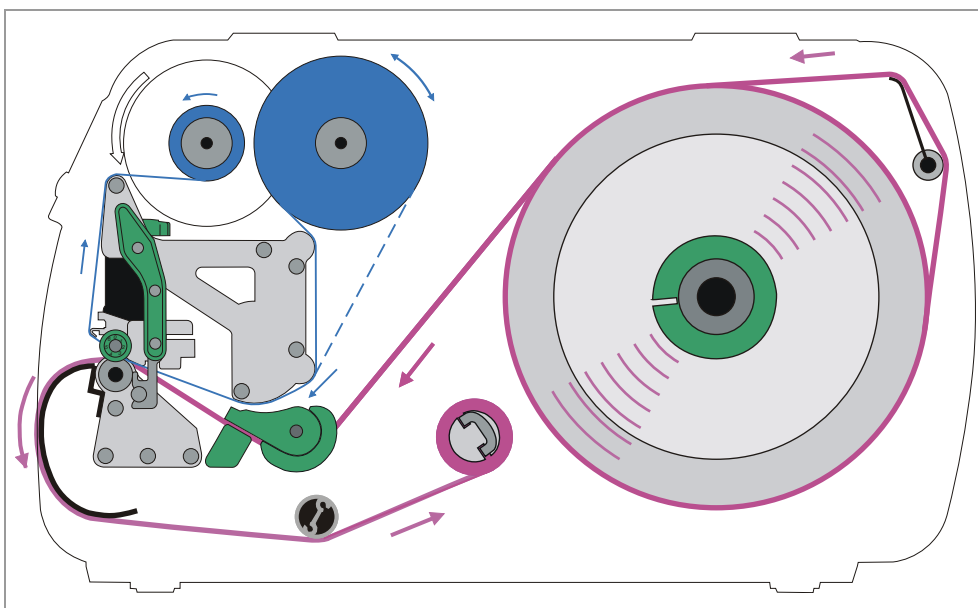
- Label material must be wound with printed side facing outwards
- Thermal transfer ribbon:
 - Solid line = printed side wound inwards
 - Dashed line = printed side wound outwards

XLP 50x standard



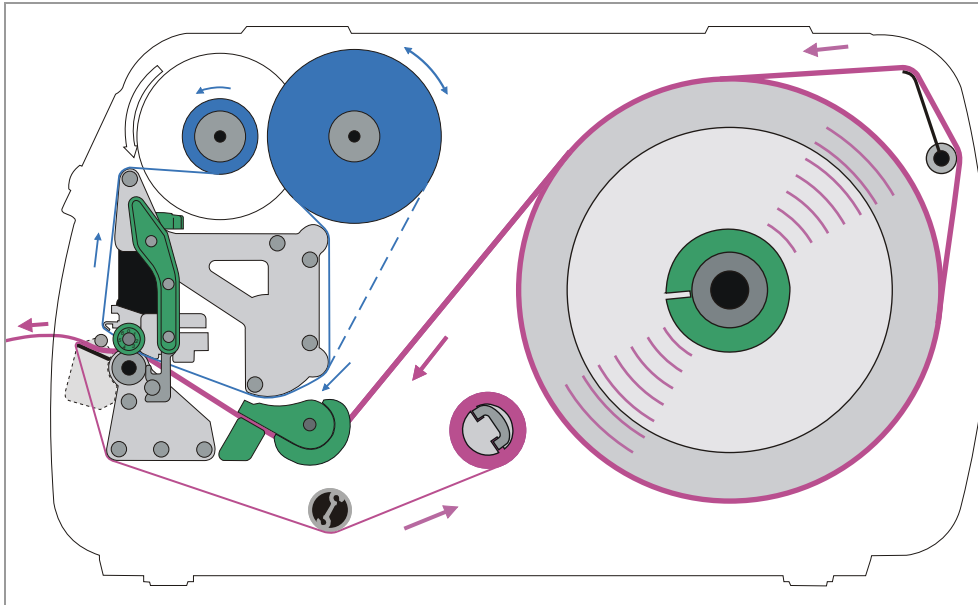
[26] Material and ribbon path in the XLP 50x „basic“ or „peripheral“.

XLP 50x with internal rewinder



[27] Material and ribbon paths in XLP 50x with internal rewinder.

XLP 50x with internal rewinder and dispensing edge



[28] Material and ribbon movement in XLP 50x with internal rewinder and dispensing edge.

INSERTING LABEL MATERIAL



WARNING!

Danger of crushing fingers when closing the front hood.

→ Always use the grip to open or close the front hood [29].

Danger of rotating parts drawing items in.

→ Don't wear loose long hair (if necessary, wear a hairnet).

→ Keep loose jewellery, long sleeves, etc. away from rotating parts of the printer.

→ Always close the front hood before printing.

Label rolls/stacks may weight several kilograms. Rolls/stacks which are falling down can cause injuries.

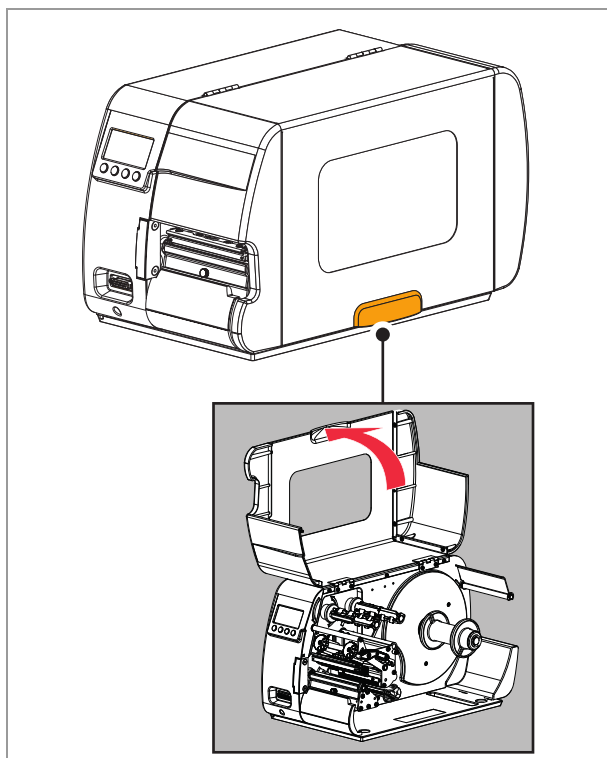
→ Wear safety shoes when handling label rolls/stacks.

→ Store label rolls/stacks safely.

During operation, the printhead can become hot!

→ Be careful whenever touching the printer.

The illustrations in this chapter show a XLP 504. In case that the operation of the XLP 506 differs in some points, this is indicated at the relevant point in the text.

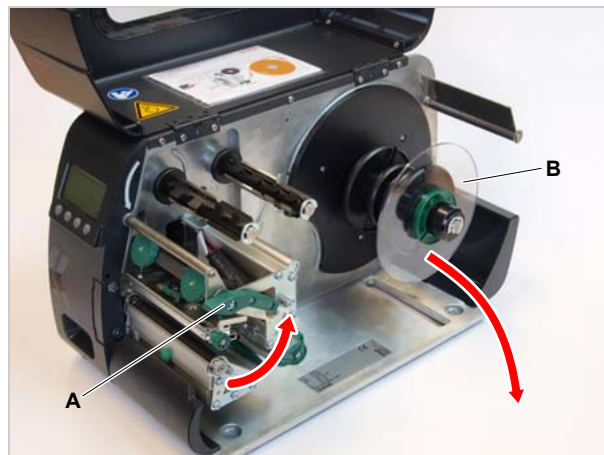


[29] Use the grip to open/close the front hood.

XLP 50x Standard

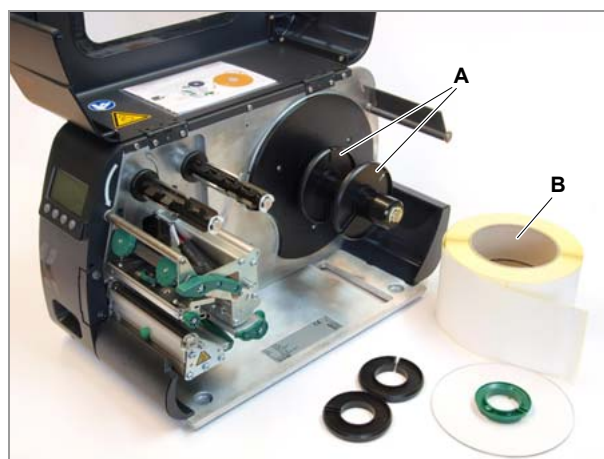
Inserting a label roll

1. Open the front hood.
2. Open the pressure lever [30A] on the printhead.
3. Remove the guiding disk [30B] of the material roller.



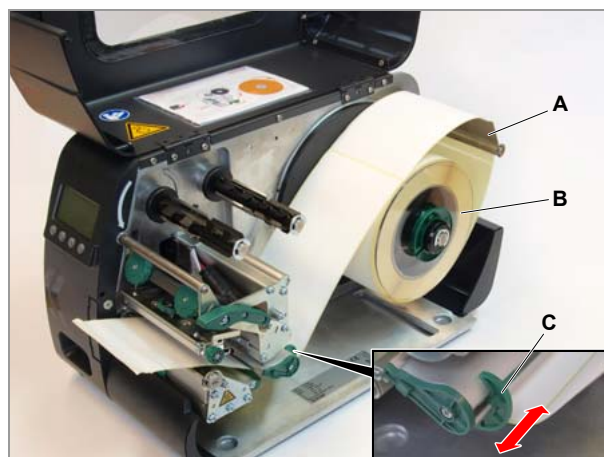
[30] Remove the guiding disk (B).

4. If necessary, insert two adapter disks [31A] onto the unwinder.
 - Distance of the adapter disks = Roll width.
 - The adapter disks must match the inner diameter of the material roll [31B].



[31] Attach the adapter disks (A).

5. Push the material roll onto the unwinder. Re-attach the guiding disk and push it up to the material roll.
 - The material roll must rotate counter-clockwise while unwinding!
6. Insert the material as shown [31].
 - Make sure to lay the material around the material strain-relief [31A]!
 - The inner edge of the material must contact the housing [33B].



[32] Insert material.

7. Push the material guiding [33A] up to the outer edge of the material without clamping the material. Continued overleaf.

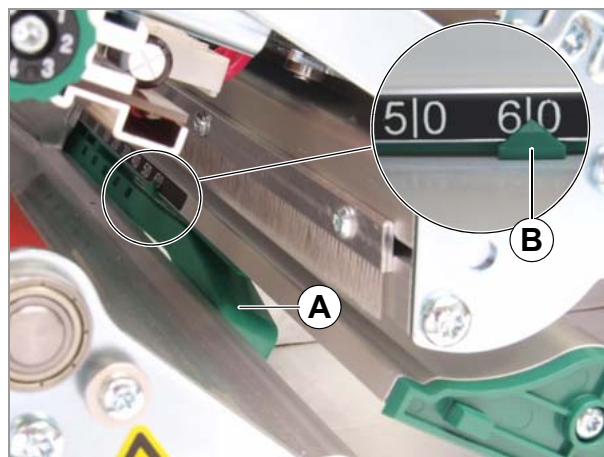


[33] Material guiding.

8. Push the sensor arm using the handle [34A] until the indicator [34B] is above the punches on the material.

▮▮▮▮▮ The optional *reflex light sensor* is located 6 mm to the right of the indicator. That means, that the indicator has to be placed 6 mm left of the middle of the reflex mark.

9. *Direct thermal* printing: Close the pressure lever.
Thermal transfer printing: Insert ribbon, see chapter **Inserting Ribbon** □ on page 119.



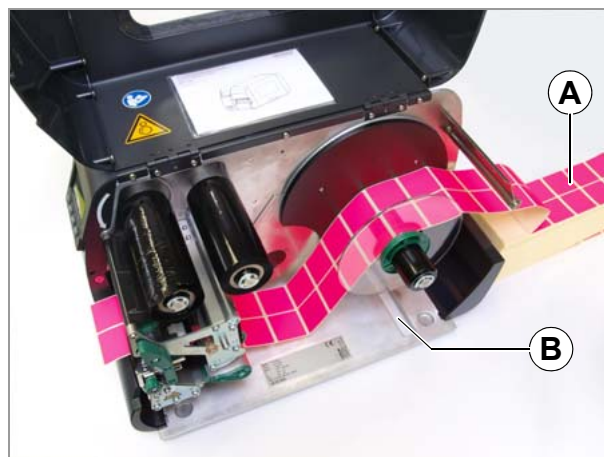
[34] Setting the label sensor (pictured without material).

Inserting Leporello Fold

Alternatively to the roller material, you can also use leporello fold (accordion fold):

1. Open the front hood.
2. Open the pressure lever on the printhead.
3. Place the leporello fold [35A] behind the printer.
4. Push the material over the material unwinder. Push the guiding disk up to the edge of the material without clamping the material.
5. Continue as described in steps 6 to 8 in **Inserting a label roll** □ on page 115.

▮▮▮▮▮ Alternatively, the material can be fed through the slot [35B] in the printer bottom.



[35] Inserting Leporello-Fold (A).

XLP 50x with internal rewinder

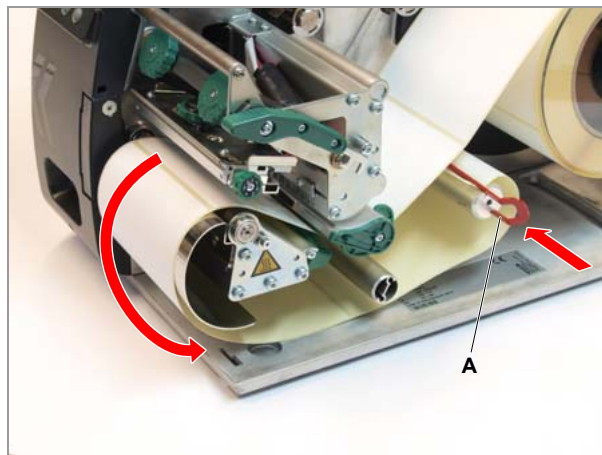
Prerequisite:

- Printer is switched on
- Rewinding function is switched on (see **Switching the rewind function on/off** □ on page 108)

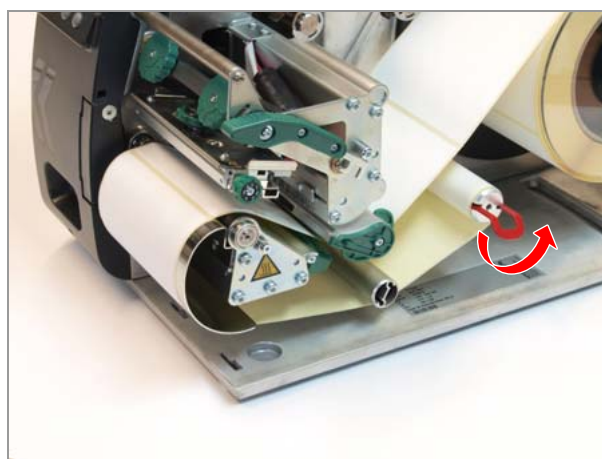
Procedure:

1. Insert the label material, see **Inserting a label roll** □ on page 115.
2. As shown, move the end of the label strip around the baffle plate towards the rewinder and fasten it to the clasp [36A].

▮▮▮ Observe, that the inner material edge must contact the inner wall on its way to the rewinder.



[36] Attach the material end to the rewinder.



[37] Tighten the material web by rotating the rewinder.

3. Push the sensor arm using the handle [38A] until the indicator [38B] is above the punches on the material.

▮▮▮ The optional *reflex light sensor* is located 6 mm to the right of the indicator. That means, that the indicator has to be placed 6 mm left of the middle of the reflex mark.

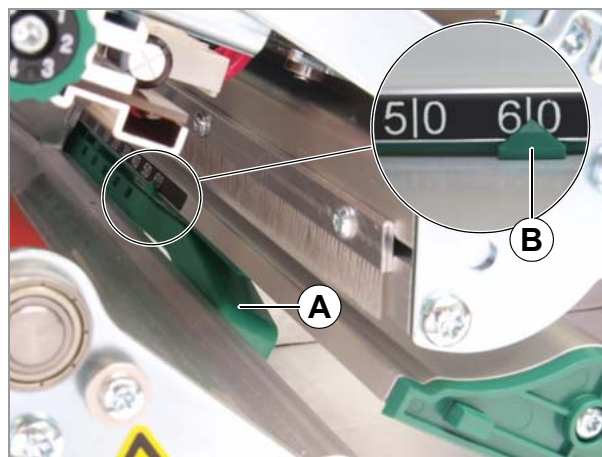
4. *Direct thermal* printing: Close the pressure lever.
Thermal transfer printing: Insert ribbon, see chapter **Inserting Ribbon** □ on page 119.

After switching on the printer, the rewinder slowly rotates in the configured direction until the material web becomes taut.

The following error message might appear before the material web is taut.

Status	5004
Rewinder mat. tear	

→ Acknowledge the message (repeatedly if necessary, if the material web is taut).



[38] Setting the label sensor (pictured without material).

XLP 50x with internal rewinder and dispensing edge

Prerequisites:

- Printer is switched on
- Dispensing function is switched on (see **Switching the dispense function on/off** □ on page 108)

Procedure:

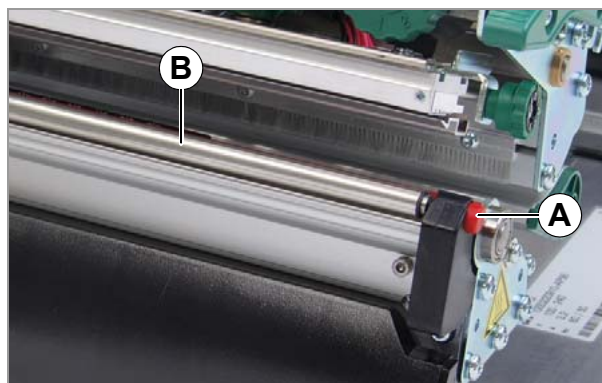
1. Press the red button [39A] on the dispensing edge to unlock the dispensing roll. Remove the dispensing roll [39B]
2. Inserting the label material, see **Inserting a label roll** □ on page 115.
3. Remove the labels from the backing paper on a length of approx. 30 cm from the end of the label web.
4. As shown, move the backing paper to the rewinder [40A].
 ■► Observe, that the inner material edge must contact the inner wall on its way to the rewinder.
5. Fasten the end of the backing paper strip to the clasp [40A].
6. Reconnect the dispensing roll.
7. Push the sensor arm using the handle [38A] until the indicator [38B] is above the punches on the material.
 ■► The optional *reflex light sensor* is located 6 mm to the right of the indicator. That means, that the indicator has to be placed 6 mm left of the middle of the reflex mark.
8. *Direct thermal* printing: Close the pressure lever.
Thermal transfer printing: Insert ribbon, see chapter **Inserting Ribbon** □ on page 119.

After switching on the printer, the rewinder slowly rotates until the backing paper becomes taut.

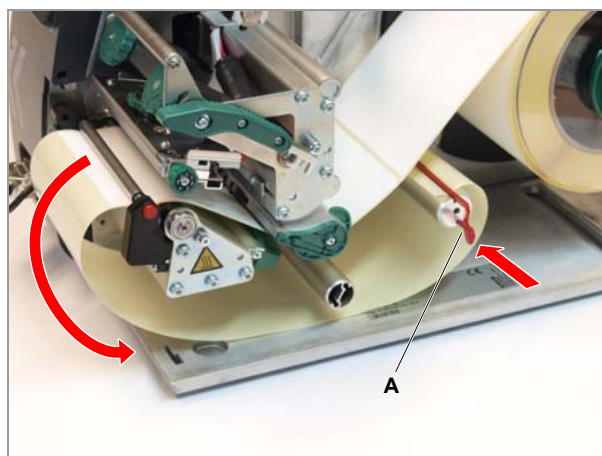
The following error message might appear before the backing paper is taut.

Status	5004
Rewinder mat. tear	

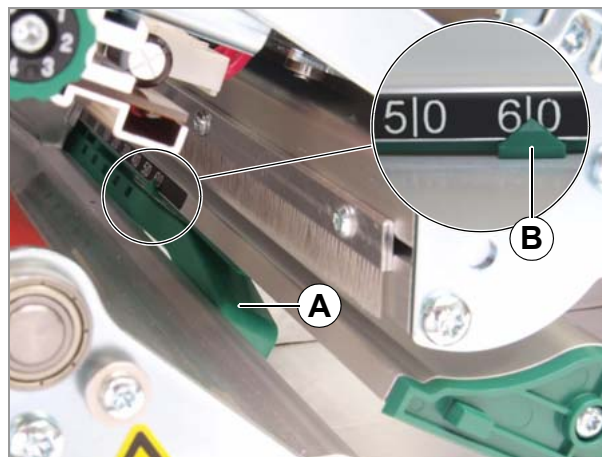
→ Acknowledge the message (repeatedly if necessary, if the material web is taut).



[39] Dispensing roll (B) above dispensing edge.



[40] Attach the backing paper to the rewinder.



[41] Setting the label sensor (pictured without material).

INSERTING RIBBON



WARNING!

Danger of crushing fingers when closing the front hood.

→ Always use the grip to open or close the front hood.

Danger of rotating parts drawing items in.

→ Don't wear *loose* long hair (if necessary, wear a hairnet).

→ Keep loose jewellery, long sleeves, etc. away from rotating parts of the printer.

→ Always close the front hood before printing.

During operation, the printhead can become hot!

→ Be careful whenever touching the printer.

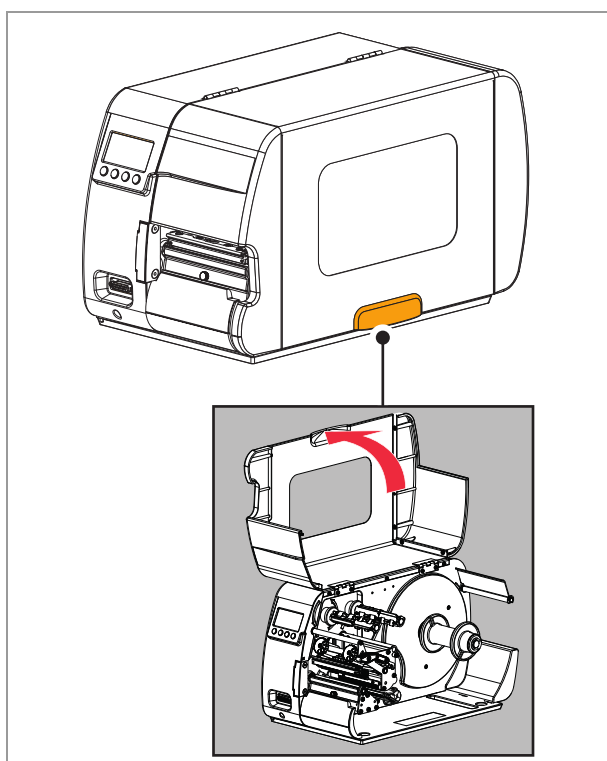
CAUTION!

Poor printing quality.

→ The thermal transfer ribbon must overlap the label width 2 mm on each side (ribbon width = label width + 2 mm)^a.

a) Exception: The label material width exceeds the printhead width. In this case, ribbon must not be wider as the printhead (= max. ribbon width).

The illustrations in this chapter show a XLP 504. In case that the operation of the XLP 506 differs in some points, this is indicated at the relevant point in the text.



[42] Use the grip to open the front hood.

▮▮▮▮▮ Ribbon only has to be inserted for thermal transfer printing.

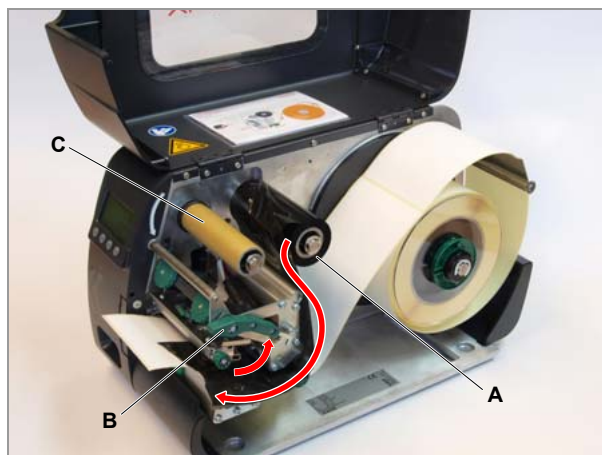
Inserting a new ribbon roll

1. Open the front hood.
2. Open the pressure lever [43C] on the printhead.
3. Push the ribbon roll onto the unwinding mandrel until it stops [43A]. Push the empty ribbon sleeve onto the rewinding mandrel [43B].

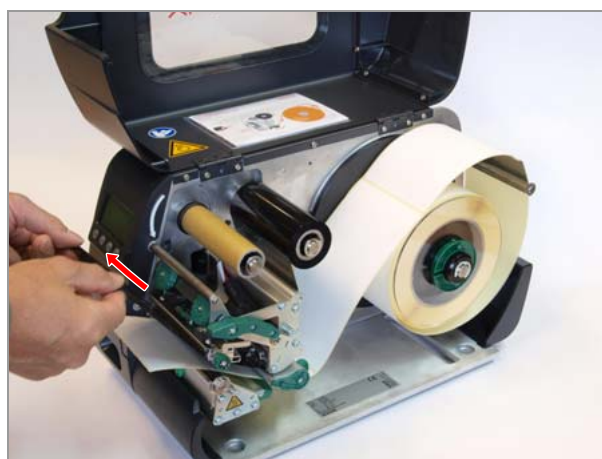
▮▮▮▮▶ Ribbon with the coloured side facing inwards rotates in a counter-clockwise direction [43]!

4. Insert the ribbon into the printer as shown [43] [44]. Fasten the end of the ribbon with adhesive tape to the empty ribbon sleeve.

▮▮▮▮▶ See chapter **Insertion Diagrams** □ on page 112.



[43] Inserting ribbon.

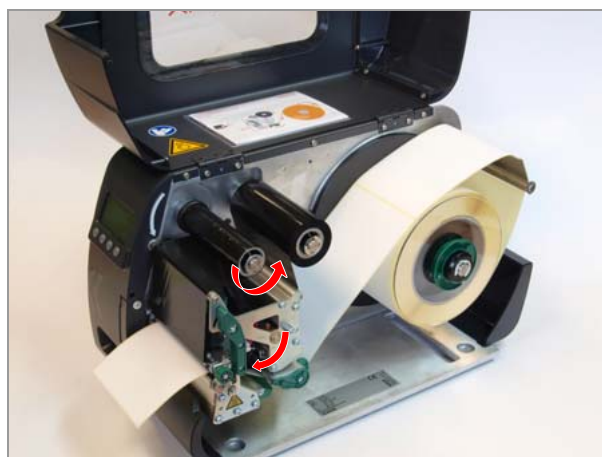


[44] Pull the ribbon and smooth it.

5. Rotate the rewinding mandrel a few turns in a counter-clockwise direction until the ribbon is free of folds [45].
6. Close the pressure lever.

Replacing the Ribbon Roll

1. Open the pressure lever on the printhead.
2. Remove the wound roll of ribbon from the rewinding mandrel.
3. Remove the empty core of ribbon from the unwinding mandrel and place this onto the rewinding mandrel.
4. Clean the printhead (see chapter **Cleaning the print head** □ on page 204).
5. Insert a new roll of ribbon as described above.



[45] Fasten the ribbon end and tighten it.

Alternating use of different sorts of ribbon

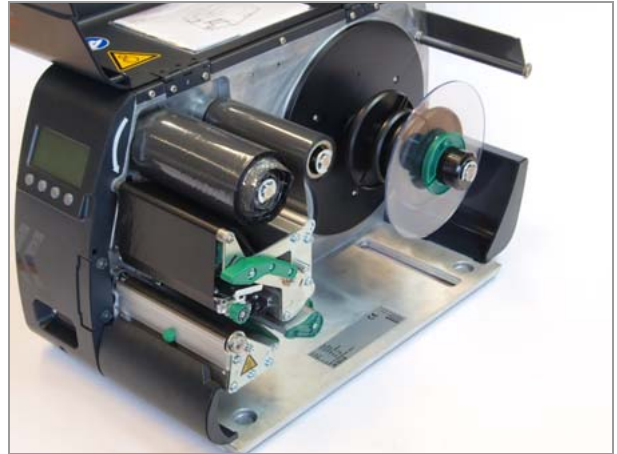
To switch between *different types of ribbons*, there is no need to cut off the ribbon each time and then insert it and fasten it to the ribbon rewinder.

It's easier as follows:

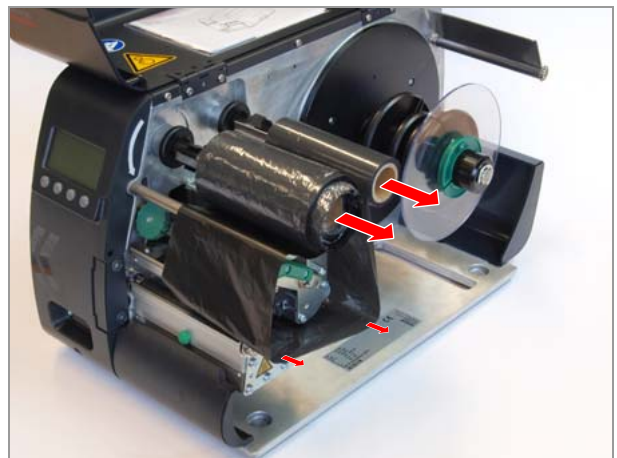
1. Open the pressure lever [46].
2. Remove both rolls of ribbon from the mandrels. Pull away the ribbon sideways from the printhead [47].
▮▮▮▮ Store your frequently used ribbons as pairs of rolls [48].

You can insert another pair of rolls as follows:

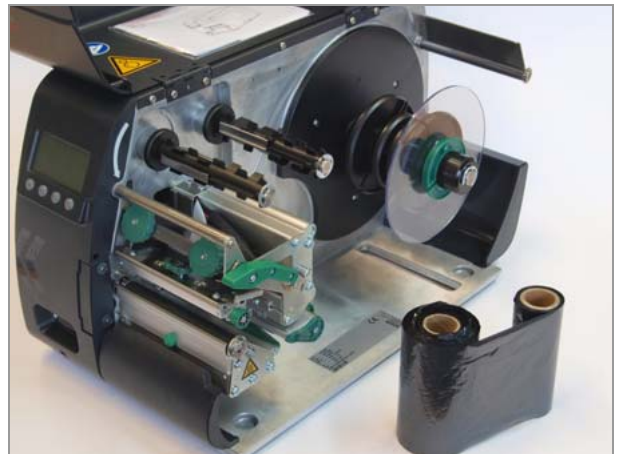
1. Push the ribbon between the rolls sideways below the printhead [47].
2. Push the ribbon rolls onto the mandrels and tighten the ribbon [46].



[46] XLP 504 with ribbon inserted, pressure lever open.



[47] Pull off both rolls.



[48] Store the ribbon rolls in pairs.

SETTING AND MONITORING THE PRINTER

Settings in 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.

For further details on setting options in the parameter menu, see chapter **Parameter menu** on page 34.

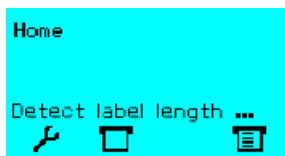
Label pitch

→ Toggle to the „Home“ screen.

A) To measure label pitch automatically:

→ Press the keys 3 + 4.

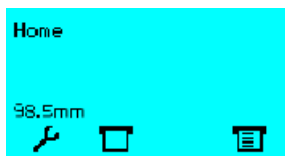
Display:



[49] The label pitch 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 and transferred to parameter Print > Material > Material length. Parameter Print > Material > Material type is set to "Punched"

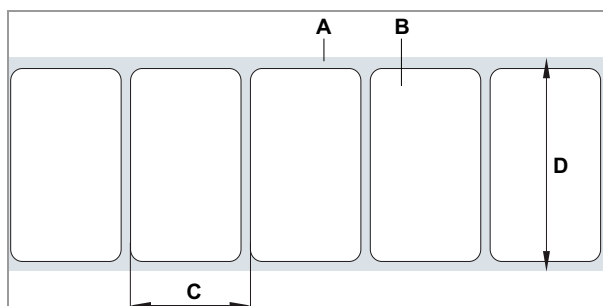
Display of the measured label pitch:



[50] Display of the measured label pitch.

B) To enter the label pitch manually:

1. Measure label pitch [51C].
2. Call Print > Material > Material length and enter the measured value in millimetres.



[51] Label material (self-adhesive labels)

- A Label web (backing paper)
- B Label
- C Label pitch
- D Material width

Material width

1. Measure the width of the material web [51D] (including backing paper).
2. Call Print > Material > 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 > Material type to „Punched“ or „Endless“, depending on the used material.

Print process

Printing without ribbon (direct thermal):


➔ Print > Material > Foil mode = „Thermal printing“.

Printing with ribbon (thermal transfer):


➔ Print > Material > Foil mode = „Thermo transfer“.

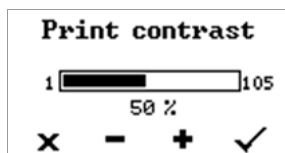
Adjusting the degree of blackness

In some cases, the printout will not become black enough, e. g. when printed on cardboard material. If necessary, the blackness can be adjusted by the following measures:

- *Increasing the print contrast*, see below.
- *Increasing the printhead contact pressure*, see **Printhead contact pressure**  on page 124.

Print contrast

Print contrast setting is done in the parameter menu by Print > Print contrast or during printing on the „Ready“ screen by pressing the  key:



[52] Print contrast setting dialog during printing (white screen).


CAUTION!

The Print contrast parameter directly affects the service life of the printhead. In general, the higher the setting of the Print contrast, the shorter the service life of the printhead. This applies especially to settings over 100%. Therefore note the following recommendation:

➔ Always select the lowest setting that will still produce acceptable printing results.

CAUTION!

Hazard of malfunction of the power supply and restart of the printer (XLP 506).

➔ Take into account the limitations regarding print contrast and print width, see chapter **(XLP 506) Print width limitations**  on page 32.

The maximum setable print contrast depends on two factors (see tables below):

- Printhead resolution
- Printspeed

Printspeed	Max. print contrast
51 mm/s (2 inch/s)	120%
76 mm/s (3 inch/s)	117%
102 mm/s (4 inch/s)	115%
127 mm/s (5 inch/s)	100%
152 mm/s (6 inch/s)	85%
178 mm/s (7 inch/s)	76%
203 mm/s (8 inch/s)	67%

[Tab. 9] Max. print contrast for printheads with 203 dpi resolution.

Printspeed	Max. print contrast
<= 76 mm/s (3 inch/s)	120%
102 mm/s (4 inch/s)	105%
127 mm/s (5 inch/s)	88%
152 mm/s (6 inch/s)	74%

[Tab. 10] Max. print contrast for printheads with 300 dpi resolution.

Printspeed	Max. print contrast
51 mm/s (2 inch/s)	100%
76 mm/s (3 inch/s)	90%
102 mm/s (4 inch/s)	70%
127 mm/s (5 inch/s)	60%
152 mm/s (6 inch/s)	50%

[Tab. 11] Max. print contrast for printheads with 600 dpi resolution.

Printhead contact pressure

Increasing the printhead (contact) pressure increases the blackness of the printout.

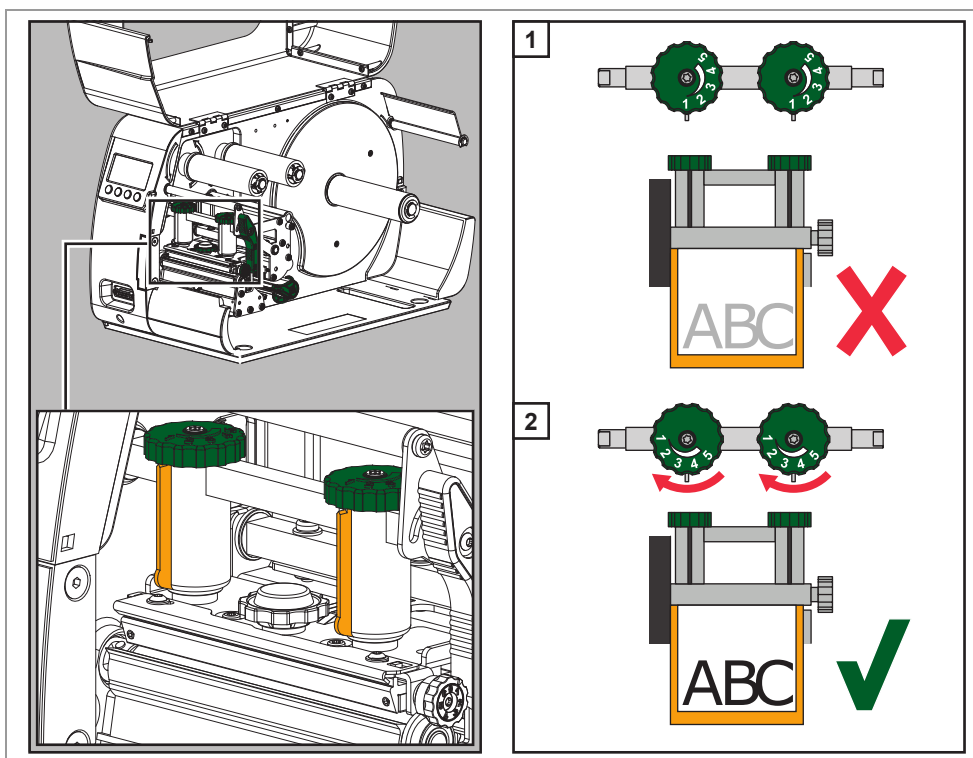
Increasing the printhead pressure:

→ Turn each dial until a *higher* number is placed opposite of the edge

Decreasing the printhead pressure:

→ Turn each dial until a *lower* number is placed opposite of the edge

▣ XLP 506 provides three dials



[53] Set the adjustment dials to a higher value to increase the printhead contact pressure.

Printhead support for narrow labels

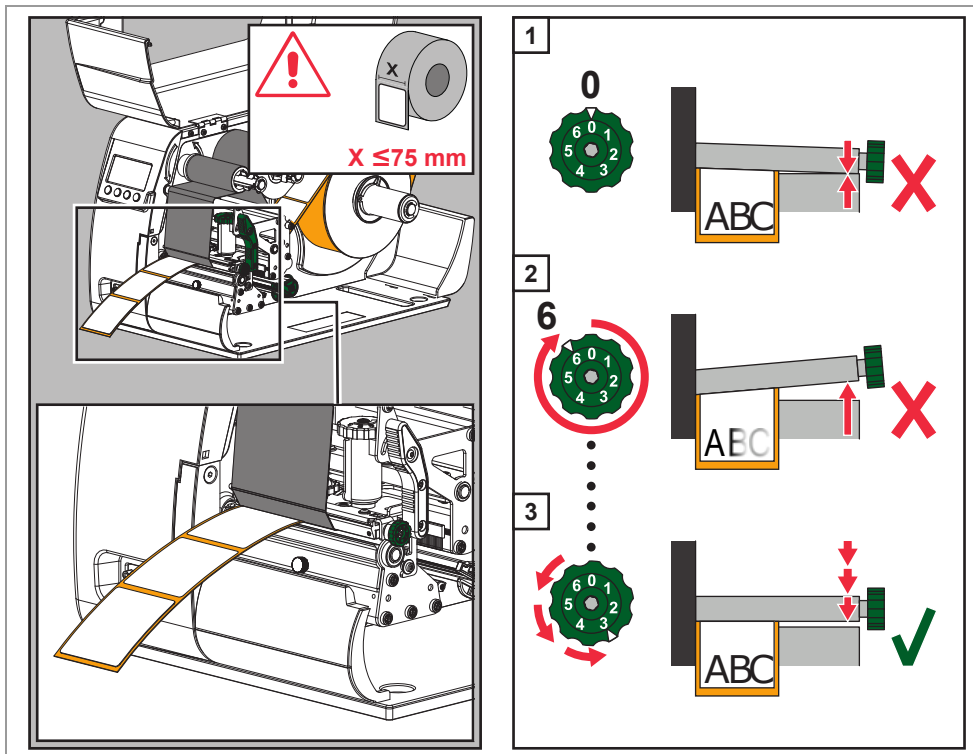
When printing narrow labels, the printhead can come into direct contact with the print roller in areas where no material is present. This can cause two unwanted effects:

- Preliminary wear and tear on the printhead
- Varying printing intensities between the two label edges

Therefore activate the printhead support, when using *narrow* labels! Narrow means here that the label width is less than 75 mm.

The printhead support setting is indicated by the position of the thumb wheel [54A]. For wide labels, we recommend the “0” setting.

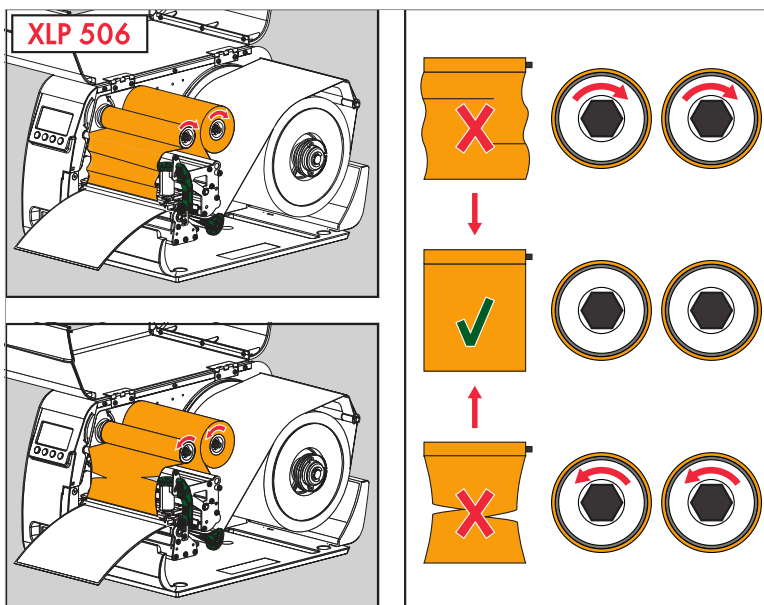
1. For narrow labels, turn the thumb wheel clockwise until the marking points to “6”. The printhead is lifted on the outside.
2. Make a test printout and check the evenness of the printed results. If the printing intensity is not even, turn the thumb back step by step, until the print intensity is even.



[54] Turn the thumb wheel clockwise to increase the printhead support.

(XLP 506) Setting the ribbon tension

The torques of the ribbon mandrels can be set using the black plastic hexagons on the ribbon mandrels. If these are turned clockwise, the torque increases.



[55] Setting the ribbon tension at the XLP 506.

The factory setting covers a wide range of different ribbon widths, but very narrow or very wide ribbons may necessitate readjustment.

Setting:

During feeding, the ribbon must run evenly and free of folds for the entire length between the mandrels. The following guidelines will facilitate setting:

The ribbon is loose or creased or is wound on the rewind mandrel too loosely [55 top].

→ Increase the unwind/rewind torque (Turn the black hex nut clockwise).

The ribbon visibly stretches or tears during printing. The ribbon is inadequately transported [55 bottom].

→ Decrease the unwind/rewind torque (Turn the black hex nut counter clockwise).



Information about setting the ribbon mandrels can be found in the service manual, chapter „Service Mechanics“ > „XLP 506: Ribbon mandrels“ > „Setting the braking torque“.

Monitoring functions

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.

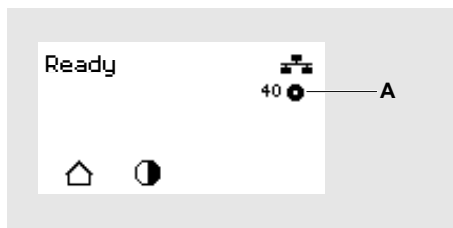
It may be necessary in some cases, however, to report the missing labels. When function **System > Print > Miss. label tol.** is set, an error message can be generated after one, or after several missing labels:

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 [56A]:



[56] Display of the remaining ribbon length (A, here: 40 m).

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

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

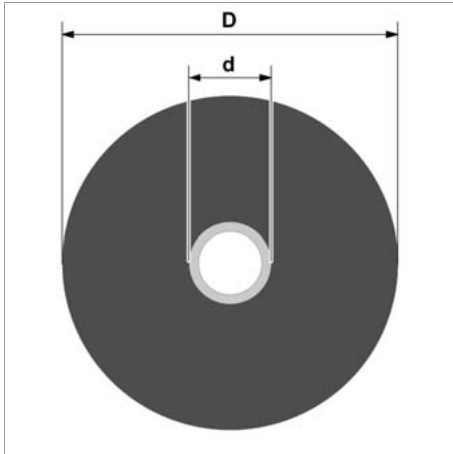
→ Set **Print > Material > Foil > Foil length** to the ribbon length in meters.

→ Set **Print > Material > Foil > Outer foil diamet.** to the outer-Ø [57D] of the ribbon roll in millimeters.

→ Set **Print > Material > Foil > Inner foil diamet.** to the inner-Ø [57d] of the ribbon roll in millimeters.

➡ Inner-Ø ribbon roll = Outer-Ø ribbon core!

➡ The default setting matches the NOVEXX Solutions standard ribbon 31077-540-110-10.



[57] 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 > Foil end warning to the desired critical ribbon length in millimetres.

→ Set System > Print > Foil warn stop to the desired behavior:

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



[58] Foil warning during a printjob: yellow background, the ribbon icon flashes.

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



Ribbon end

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



→ Proceed as described under **Inserting Ribbon** on page 119.

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

→ To do this, set Print > Material > Foil mode to „Thermal printing“.

Material end

After the end of the material roll passes by the punch sensor, the following status message appears:



→ Open the pressure lever and pull the end of the material forwards out of the printer.

PRINTING

Creating print jobs

There are two ways to create a print job:

- Layout software + printer driver
- Text file with Easy-Plug commands

Layout software + printer driver

Requirement: A printer driver must be installed on the PC (see below).

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 ¹.

Text file + Easy-Plug



The label layout is described by a sequence of Easy-Plug commands saved in a text file.

Installing the printer driver

You can find a driver for the XLP 50x and an installation instruction on our web page ². The driver supports the following Windows operation systems:

Vista / Windows 7 / Windows 8 / Windows 8.1 / Windows 10 / Windows Server 2008 / Windows Server 2008 R2 / Windows Server 2012 / Windows Server 2012 R2.

Transferring a print job

There are two ways to transfer a print job to the printer:

- via a data cable
- via a memory medium

Using a data cable

Prerequisite:

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



To use layout software:

1. Select a suitable data interface in the layout program.
2. Start printing.

Sending a command file directly:

→ Open the Windows command prompt.

→ (Serial interface) `copy testjob.txt com1.`

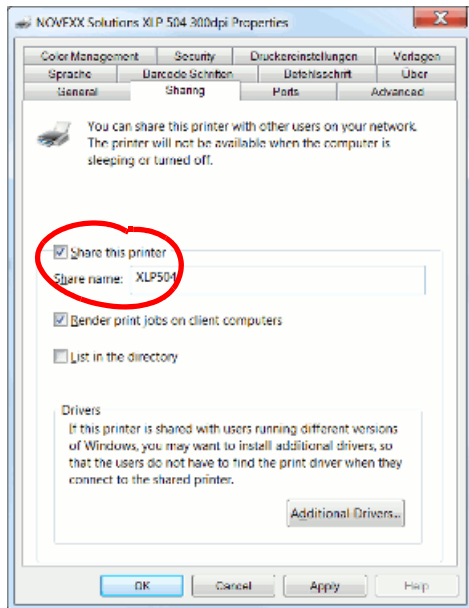
→ (Ethernet/USB interface) `copy testjob.txt \\ComputerName\ShareName`, where

- *ComputerName*: can be found under Windows 7 as follows:
 1. Click START.
 2. Type „System Information“ into the search field. A window opens.

1) www.nicelabel.com

2) www.novexx.com

3. In the right part of the window, seek the entry „System Name“. The string right of it is the ComputerName.
- *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:
 1. Open START > „Devices and Printers“.
 2. Right click on the XLP 504 symbol, then left click on „Printer Properties“.
 3. Open the „Sharing“ tab [59].
 4. Enter a „Share name“.
 5. Click OK.



[59] Entering a share name under Windows 7.

Using a memory medium

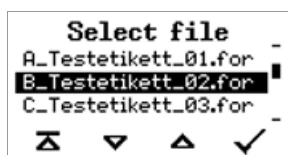
Requirements:

- The printjob is stored on an external storage medium (SD card or USB thumb drive) in folder \formats.
- ➡ Due to the higher data transfer speed, it is recommended to use a SD card.
- The file has the ending .for
- 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 printjob is stored, that is „SD card“ or „USB thumb drive“).

Starting the printjob:

1. Switch off the printer.
2. Connect the storage medium to the printer.
3. Switch on the printer.
The printer shows the „Ready“ screen (white).
4. Press the keys 2+4 to get into standalone mode.

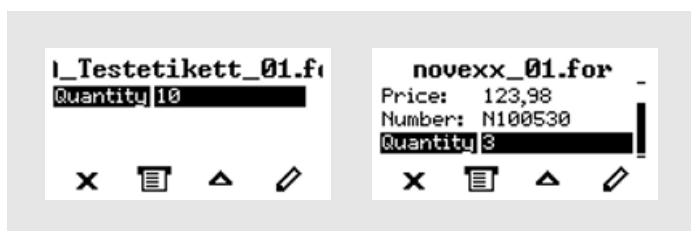
A file selection dialog with the stored printjobs opens:



[60] File selection in standalone mode.

5. Select a printjob with the keys 2 and 3. Press key 4 to load the printjob.

Another selection dialog appears. As a standard, it offers to change the print amount, which is initially defined in the printjob [61 left]. Depending on the printjob, there can be more input fields [61 right].



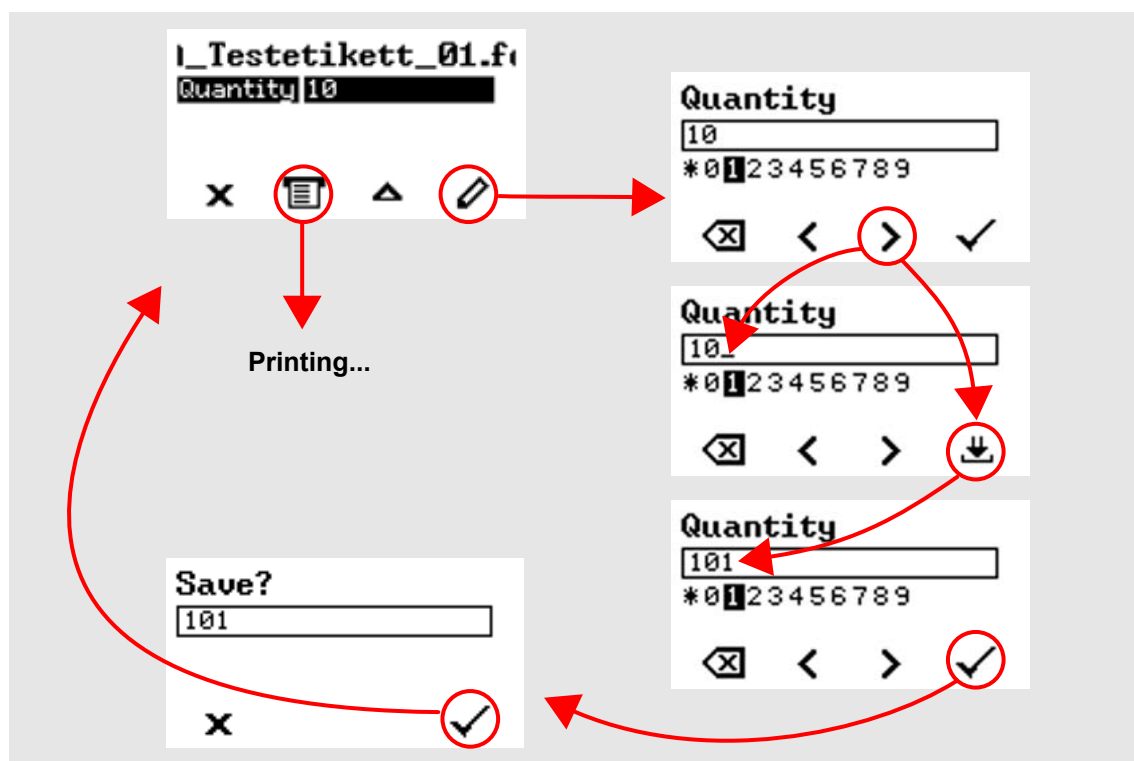
[61] File selection in standalone mode (left: standard field for querying the print amount; right: additional data input fields)

6. Press key 2 to start the printjob without changing the print amount.

► To change the print amount or other input fields, see [62].

If the printer showed the „Ready“ screen before it was toggled into standalone mode, the printing starts immediately.

7. Press the keys 2+4 to toggle to the „Ready“ screen.

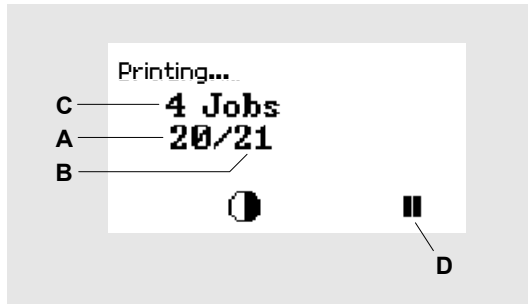


[62] Changing the print amount in standalone mode.

Monitoring a printjob

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 printjob has been transmitted and interpreted



[63] Display during the printing.

- A Already printed labels of the current printjob
- B Labels to be printed of the current printjob
- C Amount of queued printjobs
- D Pause key, stops the printing

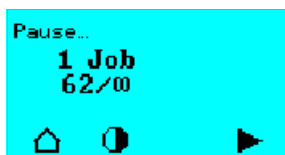
If the printer shows the „Home“ screen:

→ Press the  key, to toggle to the „Ready“ screen, to start printing.

Display examples:



[64] Printjob with endless print amount.



[65] Stopped printjob. Press key 4 to continue printing.

APPLICATION OF EXTERNAL MEMORY MEDIA

Applicable memory media

The following external memory media can be used with a XLP 50x:

- USB thumb drive
- SD card

On those media can be stored fonts, logos, formats or other data.

- The memory medium must be formatted with directory structure FAT32 (common structure with Windows)
- The files must be stored in the relevant folders (see below) to be retrievable by the printer
- Flawless function may only be guaranteed for the card types distributed by NOVEXX Solutions:
 - USB thumb drive: A105325 (2 GB)
 - SD card: A101465 (2 GB)

Fonts directory

Memory media can be used as a font memory storage for fonts which are not included in the standard font generator of the printer. To do this, create a directory `\fonts` on the card into which you copy all the fonts you want to use.

Font type	File extension	Easy Plug command
True Type	*.ttf	#YN
Fix Size	*.aff	#YT
Speedo	*.spd	#YN

[Tab. 12] Font types, applicable with memory cards, their file extensions and the Easy Plug commands required for printing text using those font types.

Speed

Regarding the speed of true type or speedo fonts, that are stored on memory media, counts the following: Text fields using true type fonts are prepared slower for printing than text fields with comparable speedo fonts. The difference in speed is increasingly noticeable with the amount or size of text to be printed.

File name

A font file must be renamed as follows for it to be accessed using Easy Plug:

`fontxxx.*`

(Example: `font260.ttf`)

- `xxx` = number from 001 to 999; this number is entered in the relevant Easy Plug command in order to access the font.
 - `.*` = extension, `.ttf`, `.aff` or `.spd` can be used.
- If possible use numbers greater than 200, because smaller numbers (100s) are sometimes assigned to internal fonts. If font names are repeated, the printer selects the internal font.

RAM disk

The following fonts are loaded from the memory card onto the internal RAM disk, while the printer is powering up – assumed they are named according to the pattern described above:

- speedo fonts (e.g. `fontxxx.spd`)
- true type fonts, if numbers from 900 to 999 are used in the font names (e.g. `font900.ttf`)
- fixfonts, if numbers from 900 to 999 are used in the font names (e.g. `font900.aff`)

True type fonts should always be loaded on RAM-disk, if

- high print performance is necessary
- Unicode fonts are ought to be used

■ You must reserve at least as many kilobytes of memory on the RAM disk as are occupied by the fonts which are ought to be loaded from memory card. To do so use the parameter `System > Memory > Font downl. area!`

■ In order to save memory capacity, rename those fonts on the memory card which you are not currently using.

■ The following status report shows that insufficient memory has been reserved on the RAM disk:

Status	8201
Font downl. full	

Logos directory

When loading or proceeding logos, the Easy Plug commands `#YK`, `#DK` and `#DC` use the directory `\logos` on the memory medium.

■ The directory `\logos` must be created on memory card or RAM disc before calling one of those commands!

Graphics directory

Graphics files may be stored in an arbitrary directory on the memory medium, if the file designation in the Easy Plug `#YG` command includes the complete path.

■ If the filename in the `#YG` command *doesn't include the path*, the graphics file must be stored in the `\graphics` directory!

Formats directory

Files which are containing print jobs (`*.for`) and firmware files (`*.s3b`) must be stored in a directory named `\formats`. Then, those files can be activated in standalone mode.

For details see chapter **Standalone Operation** □ on page 141.

Logfiles directory

For the purpose of error tracing, the Easy Plug printjobs transmitted to the printer can be saved on memory medium:

- Softwarereset and Powerfail are written into the log file
- A firmware update stops the file logging
- Each printjob is written in a separate log file (the end of the printjob is recognized by `#Q`)
- The log files are written in the folder `\logfiles`

Filename: `EPxxxxxx.LOG` (example: `EP000001.LOG`)

■ The file log function is not supported with MLI printjobs.

TROUBLESHOOTING



Print misalignment using the internal rewinder

As soon as a job is received, the rewinder controller calculates the main initialisation values for the rewinding process based on the given material width and printspeed. These values are suitable for a wide range of applications.

However, these settings may cause *print misalignment* in certain special applications. In these cases, the main initialisation values will have to be modified. Such applications include printing on:

- Very narrow labels
- Very coarse backing paper
- Very thick backing paper compared to the label
- Labels stuck on the backing paper
- Backing paper perforated along label contour



➡ Only qualified service technicians are permitted to edit the main initialisation values!

Special Applications

PRINTING WITH 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.

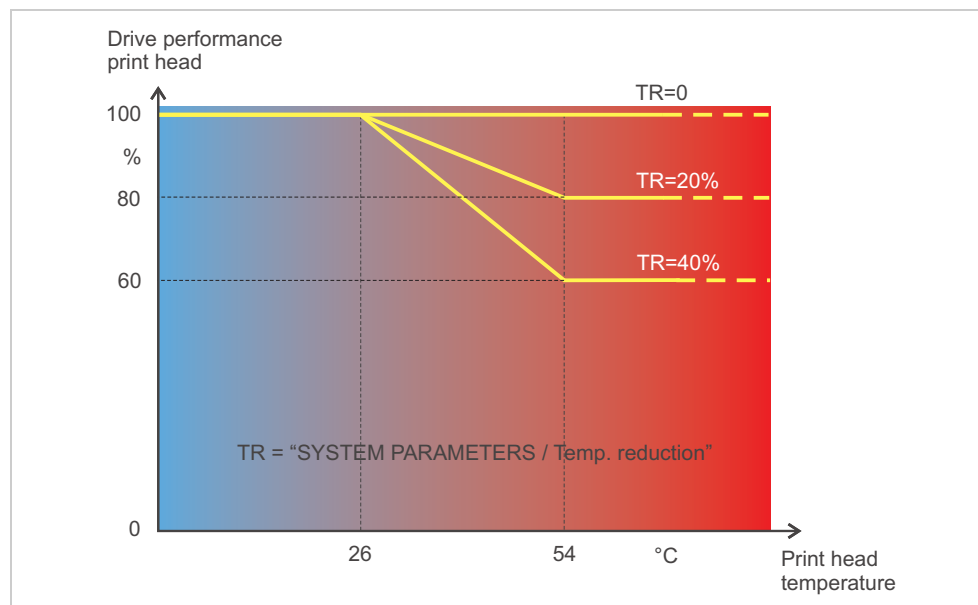
When the printer is being used for a big print job, the temperature of the print head and the print contrast increase during printing. This increase is greater, the larger the printjob and the larger the amount of black to be printed.

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 > 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 > Temp. reduction** is [66].

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 > 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.

[Tab. 13] Parameters for setting the temperature compensation.



[66] With the parameter **System > Print > 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 > 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%.

PRINTING WITH START SIGNAL

Application notes

In many applications, printing is normally triggered by a start signal, which typically comes from one of the following sources:

- *Button* at operation panel (Display „Home“: Press **1** button)
- *Footswitch* (see chapter **Footswitch** on page 138)
- *Light sensor at the dispensing edge* (see chapter **Light sensor at dispensing edge** on page 139)
- *External signal source* (see chapter **External signal source** on page 140)

This chapter describes...

- several possibilities of connecting a start signal source
- required settings in the parameter menu of the printer

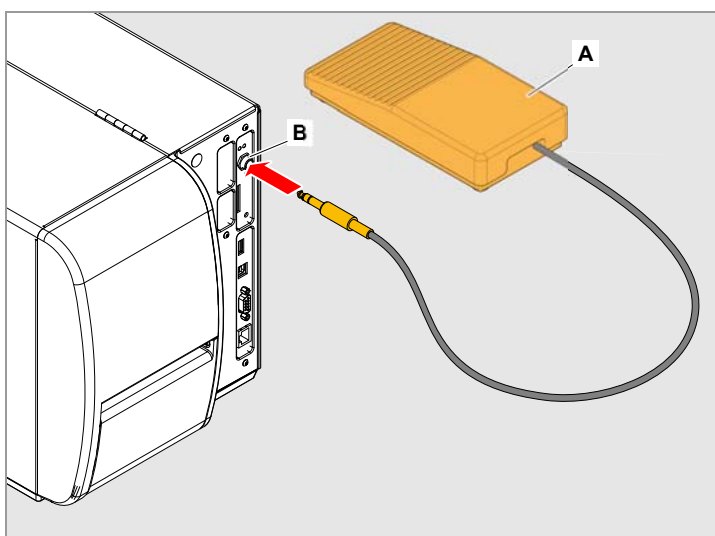
Connecting the signal source

Footswitch

A Footswitches is available as accessory for the XLP 504 and is shipped ready-to-install.

Article number: A4053

→ Connect the footswitch to the singlestart connector [67].



[67] Connect the footswitch (A) to the singlestart connector (B) at the pinter.

Required parameter settings:

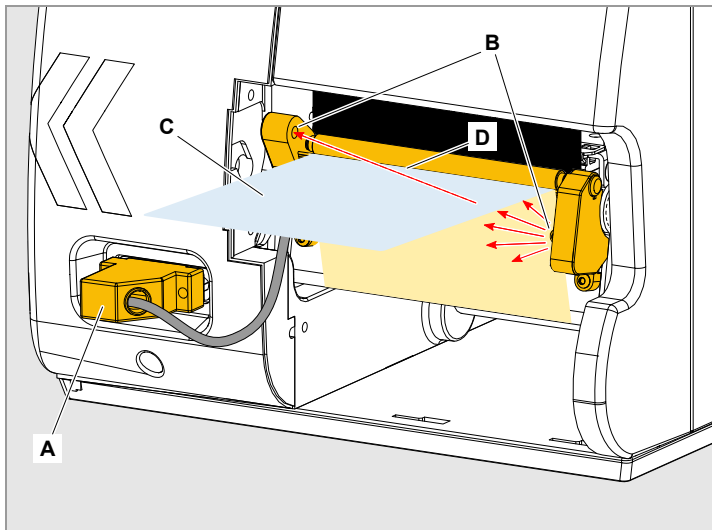
Purpose	Parameter	Setting
Accept start signals	Options > External signal	Singlestart
Signal source	Options > Dispenser > Start source	Foot switch
Signal flange	Options > Start print mode	Pulse rising

Light sensor at dispensing edge

➡ Only with XLP 50x dispenser (= XLP 50x „peripheral“ with internal rewinder and dispensing edge)

The XLP 50x dispenser is shipped with a dispensing edge with a light barrier [68B], which serves as signal source. After printing and dispensing, the protruding label [68C] blocks the light barrier and stops the printer until the label is taken off. As soon as the light barrier is clear again, the next label is printed and dispensed.

➔ Connect the light barrier to the D-Sub connector at the printer front side [68A].



[68] Dispensing edge sensor at an XLP 50x dispenser: The dispensed label (C) interrupts the light beam (D) of the light sensor (B) (fig. shows XLP 504).

Required parameter settings:

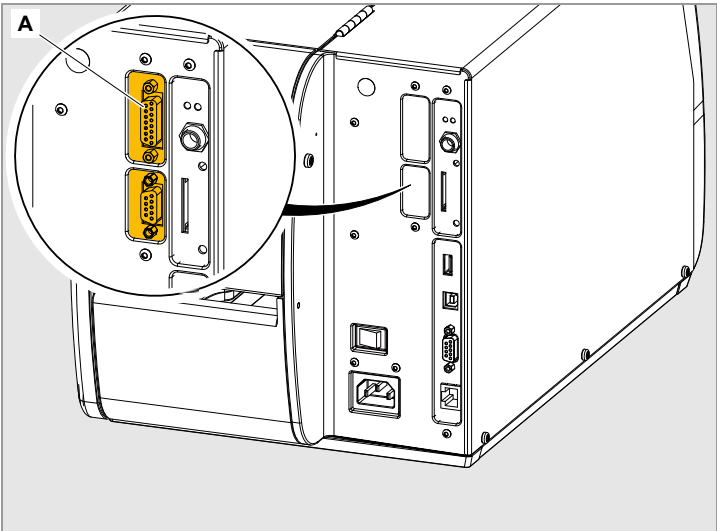
Purpose	Parameter	Setting
Accept start signals	Options > External signal	Singlestart
Signal source	Options > Dispenser > Start source	Light barrier
Signal flange	Options > Start print mode	Pulse rising

External signal source

The optional available I/O board provides a signal interface shaped as a D-Sub connector [69A]. To this connector, a start signal source can be connected. As signal source serves usually a product sensor (photoelectric switch). The connection cable has to be assembled by the user.



For details about the connector pinout, refer to the service manual, topic section „Service Electronics“, chapter „I/O-Board“ > „Signal interface“ > „Circuit diagrams for signal inputs“.



[69] Signal interface (A) at the optional I/O board.

Required parameter settings:

Purpose	Parameter	Setting
Accept start signals	Options > External signal	Singlestart
Signal source	Options > Dispenser > Start source	--
Signal flange	Options > Start print mode	Pulse rising

STANDALONE OPERATION

Requirements

- *External memory medium* (SD card or USB thumb drive)
- *Comuter*, to write on the memory medium
- (Optional) *Keyboard*, simplifies entry of variable data

Keyboard type	Order #
USB-keyboard without numeric keypad, German layout	A8407
USB-keyboard without numeric keypad, US layout	A8406

[Tab. 14] Keyboards available as accessory.

→ The matching keyboard layout is set with parameter *Options > Keyboard*.

➡ Before first use, check if the intended keyboard really works with the printer.


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 helpfull to imagine two consoles, between which can be switched at any time 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

[Tab. 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 the memory card
- Entry or selection of field content
- Updating Firmware from memory card

Selecting files from a memory medium

Requirements

- The file is stored on an external memory medium (SD card or USB thumb drive) in folder \FORMATS
- The file has one of the extensions .for (printjob or setup file) or .s3b (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 printjob is stored, that is „SD card“ or „USB thumb drive“).

Selecting a file

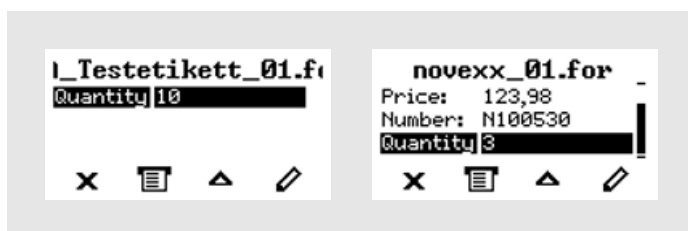
1. Switch off the printer.
2. Connect the memory medium to the printer.
3. Switch on the printer.
The printer shows the „Ready“ screen (white).
4. Press the keys 2+4 to switch to standalone mode.

A file selection dialog appears, which shows the stored printjobs:



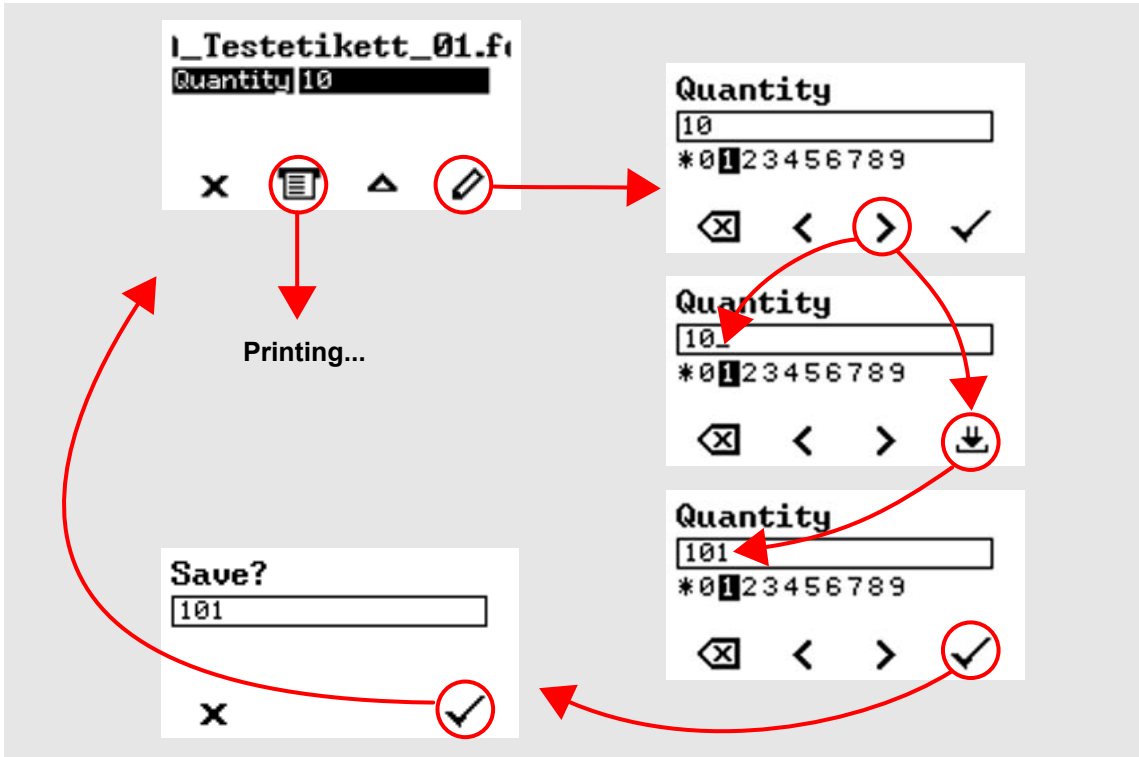
[70] File selection in standalone mode.

5. Select a printjob with key 2 and 3. Press key 4 to load the printjob.
Another selection dialog appears. As a standard, the print amount can be changed, which is defined as default in the printjob [71 left]. Depending on the printjob, there can be more than one input fields [71 right].



[71] File selection in standalone mode (left: standard input field, querying the print amount; right: printjob with additional input fields)

6. Press key 2 to start the printjob without changing the amount.
 ■ For change of the print amount or of other input values, see [72].
 If the printer showed the „Ready“ screen before switching into standalone mode, the printing starts immediately.
7. Press keys 2+4 to switch to the „Ready“ screen.



[72] Changing the print amount in standalone mode.

Key assignment

The keys on the operation panel are assigned to function keys on the external keyboard according to tab. 16. 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

[Tab. 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

[Tab. 17] Valid keys in standalone mode.

Keyboard key	Function
	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)

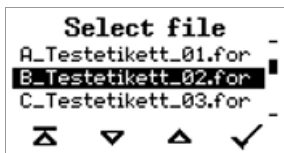
[Tab. 17] Valid keys in standalone mode.

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:

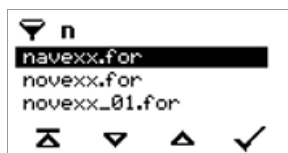
After changing to the standalone mode, the following is displayed:




[73] File selection in standalone mode.

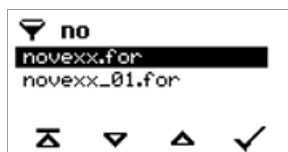
A file named `novexx.for` is supposed to be started.

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



[74] File selection with filter function.

The filter icon  stands for the activated filter function. Through the filter appear only those file names that start with „n“ [74]. If another character is typed in, e. g. „o“, only file names that start with „no“ are listed [75].




[75] File selection with filter function.

■ The filter is case sensitive!

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

Executing printjobs

Files with the extension `.FOR` are interpreted as printjobs.

All input fields are polled, which are defined as such in the printjob (see [Example application](#)  on page 146). 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 printjob file may contain *only one* printjob. If any printjob file contains more than one printjobs, only the first printjob is executed.

➡ The new start of the print job can be avoided by setting the parameter System > Print > Single-job mode to „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 extension `.S3B` are interpreted as printjobs.

Selecting a firmware file means starting a firmware download. As this is a fundamental intervention to the system, firmware files are not executed immediately. The query "Firmwaredownload ? No/ Yes" demands explicit confirmation of the operator.

➡ A firmware file renamed to the extension `.FOR` is executed without querying.

Automatic file execution

If a file named `DEFAULT.FOR`¹ exists on the memory medium in the folder `\FORMATS`, it is executed automatically at system start.

➡ If a file `\AUTOSTRT.FOR`² is also existing in the root directory, it will be executed first. But be aware that standalone-printjobs are only executed properly, if the relevant file is stored in the folder `\FORMATS`, as described above.

Insert input field in printjob

Input fields can be defined in the following Easy Plug field types:

- Text field
- Counting field
- Barcode field

These field types can be defined through the following Easy Plug commands: YT, YN, YB, IDM, PDF, MXC, CBF, YC, YS, YG.

Using a special syntax it is made clear in these commands that the text dealt with here is not a fixed text, but text requested at the time of implementation.



Further information on the input field syntax can be found in the description of the respective command in the Easy Plug Manual.

1) All letters lower case or all upper case; „Default.for“ doesn't work

2) Not case-sensitive

Example application

Preparation

1. Generate two text files with the content shown in the tables below.

Tip: Cut out the content using the Acrobat Reader text selection tool and copy it to a text file.

#!A1#IMN100/60#ER
#J40#T5#YT107/0///Simple test for#G
#J30#T5#YN100/0/60///STANDALONE Mode#G
#Q3/

[Tab. 18] Example file „TEST.FOR“

#!A1#IMN100/60#ER
#J40#T5#YN100/0/60///\$<Color:>,Lightred#G
#J30#T5#YT107/0///\$<Price:>,123,98#G
#J20#T5#YT107/0///\$<Article number:>,#G
#J10#T5#YT107/0///Fixtext#G
#Q3/

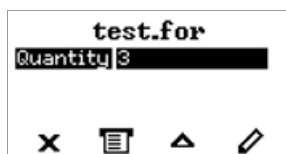
[Tab. 19] Example file „NOVEXX.FOR“

2. Create a directory on the memory card called \FORMATS.
3. Store the two text files as TEST1.FOR and NOVEXX.FOR on the memory medium in the folder \FORMATS.
 - Tip: The file extension must be *.FOR!
 - Tip: Filename lettering is *not* case sensitive!
4. Switch off printer.
5. Connect the memory medium to the printer.

Example „Test.for“

1. Turn on printer and toggle to standalone mode.
2. Call up the file TEST1.FOR.

A dialog showing the standard input field „Quantity“ opens. The quantity 3 is set as default, because it is defined in the printjob.



[76] Example „test.for“ after start.

Proceed as described in the following to increase the quantity, for example to 10. To print the default quantity without a change, press key 2.

3. Press key 4.
The text input dialog opens.
4. Press key 1.
The default quantity is erased.
5. Press key 3.
The cursor jumps to the input field.

6. Press key 4.

The number 4 appears in the input field (which was marked before).

7. Press 2x key 2.

The cursor jumps back to the character selection line and marks number 0.

8. Press key 4.

The „0“ is appended in the input field.

9. Press 2x key 4.

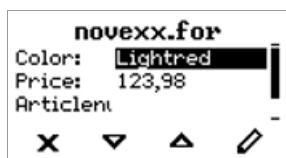
The quantity „10“ is confirmed and printing starts.

The printer prints the given label quantity.

▮▮▮▮ Quantity 0 = infinite printing!

Example „Novexx.for“

In case of the `NOVEXX.FOR` file, this works somewhat differently. Once the file is called up, the following is displayed:



[77] Example „novexx.for“ after start.

In the first line the printer will ask for the content for the first data field. The text “Color” is a prompt and therefore not printed. The preset content of the printjob is called “Lightred”.

- *Without keyboard:* After pressing key 4, you can enter the desired text in characters. Entering letters works in the same way as digit entry (see example `TEST.FOR`).
- *With a keyboard:* After pressing F8 and deleting the default entry with the backspace key, you can simply type in a different content.

▮▮▮▮ The entry may only have a length that ensures the printout does not extend over the label edge! - otherwise a printer error message is displayed!

The next input field is displayed and then the next etc., until all input fields have been processed.

At the end you may change the quantity of labels to be printed if required.

Data input by interface

Apart from putting in data by operation panel or by external keyboard, the data can be sent via interface.

Application example: Reading in data from a RS232 barcode scanner via serial interface.

Selecting the interface

→ Set Printer Language > EasyPlug Setting > StandAlone Input to the desired interface.

▮▮▮▮ Listed are only interfaces, which are available in the printer and are not already occupied by another function. The parameter Interface > Print interface must not be set to „Automatic“!

Application notes

The following characters or character sequences are replaced by *respectively one* „Enter“ action, if received.

- <CR>¹
- <CR><LF>
- <LF>²
- <LF><CR>

■ Data received at the interface are processed *only then*, if the printer is switched to standalone operation.

Example

Example of a standalone printjob on the memory card:

```
# !A1#DC
#IMSR100.08/100.08
#HV50
#PR8/8/
#RX0
#ERN/1//0
#R0/0
#VTS/Var1//10///Test Var1#G
#VTS/Var2//10///Test Var2#G
#T34.16 #J90.75 #FD/0/L #SS100/BVUN/42X42/0 #VW/L/Var1#G
#T34.08 #J79.58 #FD/0/L #SS100/BVUN/42X42/0 #VW/L/Var2#G
#Q1#G
#!P1
```

The following data is received via the data interface:

```
Content1<cr><lf>
Content2<cr><lf>
3<cr><lf>
```

The first two lines assign the content „Content1“ to the variable „Var1“ and the content „Content2“ to the variable „Var2“. The third line assigns the print quantity „3“.

1) <cr> = 0x0D
2) <lf> = 0x0A

DATA TRANSMISSION WITH ETHERNET

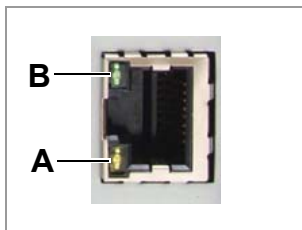
CAUTION! - Unqualified manipulations of a data network can disturb or stop its proper functioning.

Connecting a device to a network requires network administrator knowledge.

→ Consult your network administrator for assistance, if you don't have knowledge on this level!

Integration of Ethernet Interface

The Ethernet interface of the printers is layed out as 10/100 Base T. The transmission speed is set by autonegotiation. LEDs are located above the RJ 45 plug, showing the network situation [78].



[78] Position of the signal LEDs.

- A LED yellow lights = Printer is connected to network; LED flashes = Network traffic
- B LED green lights = High transmission rate (100 Mbit/s)

MAC Address

An internationally unique MAC (Media Access Control) address is required for Ethernet operation. It consists of 6 bytes and is usually separated by colons or hyphens (hexadecimal, e.g. 00:0a:44:02:00:49 or 00-0a-44-02-00-49). The first 3 bytes are constant 00:0A:44 (Novexx code), the last 3 bytes vary for each device. The product manufacturer is responsible for the allocation of the MAC addresses.

IP Address

In the printer software a TCP/IP protocol stack is implemented, i.e. for network purposes the device requires an IP address along with the MAC address. IP-addresses are always displayed as 4 bytes separated by dots (e.g. 192.168.1.99). IP addresses are assigned by the network operator, as a rule the network administrator.

■ MAC and IP addresses originate from different protocol layers and are generally independent of each other.

Further information about TCP/IP can be found in the abundance of literature on the subject.

Setting the IP Parameters

The IP-parameter settings can either be set fix, or they can be requested from a DHCP server with every start of the printer. To assist the system administrator, the DHCP server is provided a device name on request, which consists of a combination of printer type + 3 digits from the MAC address. (e.g. XLP504__300dpi_020049). The following values have been preset:

- IP address: 192.168.0.99
- Net mask: 255.255.255.0
- Default gateway: 0.0.0.0

Menu	Parameter	Description
Interface > Network	IP Addressassign	Here, please set "Fixed IP address" or "DHCP".
	IP address	IP parameter input fields, in case "Fixed IP address" was set for the address assign type.
	Net mask	
	Gateway address	

[Tab. 20] Setting the IP parameters in the printer menu

➡ Connection to a name server is not required.

⚠ WARNING: The address allocation for each device must be clear and unambiguous. Ask your network administrator for assistance!

Transmission with Raw Socket Interface

Printing data can be transmitted using a parameterisable socket interface (TCP server socket on port number > 1024).

This protocol is supported by

- all Unix derivatives; a connection similar to that of terminal servers can be established.
- Windows operating systems (Windows 2000 or higher)

Parameter	Description
Interface > Network > Port address	Here you can select the port number of the service in section 1024-65535
Interface > Print interface	„TCP/IP SOCKET“ must be set in order to receive printing data at the set port number.

[Tab. 21] Settings for sending via raw socket interface

Transmission with LPD Server

Printing data can be transmitted to the printer using the LPR/LPD (Line Printer Daemon) protocol ("BSD Spooler").

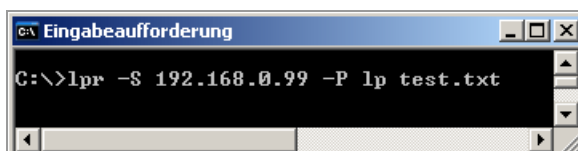
This protocol is supported by

- all Unix derivatives
- all Windows operating systems

➡ The print queue of the host must be named „lp“!

Example

1. Set parameter Interface > Print interface to „LPD server“.
2. Send the printjob file (here: „test.txt“) as illustrated using the „lpr“ command [79].



[79] Sending a printjob with the „lpr“ command.

➡ Enter „lpr ?“ to get a list of the admissible command options.

Troubleshooting

The following should be checked if a problem occurs:

- Ethernet connection: The yellow LED belonging to the printer network socket must be illuminated. If this is not the case, possible sources of error are:
 - that the network is not connected to the outlet.
 - ISDN outlet: Erroneous, the network cable was connected to an ISDN instead of a network outlet. Both outlet types do not differ mechanically.
 - an incorrect cable (ISDN cable?) is used to connect the printer to the network outlet.
 - a defective hub/switch.
 - a defective printer board.
- IP parameter: The defined parameters or parameters set via DHCP are displayed in the “Printer Status” printout. A “ping” to the set IP address must return an echo. This also works if a different interface is set in the Easy Plug Interpreter parameter. Possible source of error: Incorrect configuration of a network participant.
- On the printer, either “TCP/IP SOCKET” or “LPD server” must be set in parameter `Interface > Print interface`.

ACCESS VIA WEB/FTP SERVER

Web server

Applications

The web server makes it possible

- to set or read the values of parameters from the parameter menu via a web browser
- to control the operator panel of the labeller resp. the printer via a web browser.

■ The web server is *not* multi-session compatible, i.e. only one user can be logged in at any time.

■ The web server is a setup utility, not an operational one. The web server should not be heavily used during a high performance application of the dispenser, otherwise this could result in losses in machine performance.

Prerequisites

- The printer is connected to a network
- A valid IP address is assigned to the printer (by the network administrator or by a DHCP server)
- Interface > Network > Services > WEB server must be set to "On".

Starting the web server

1. Note down the IP address of the printer.

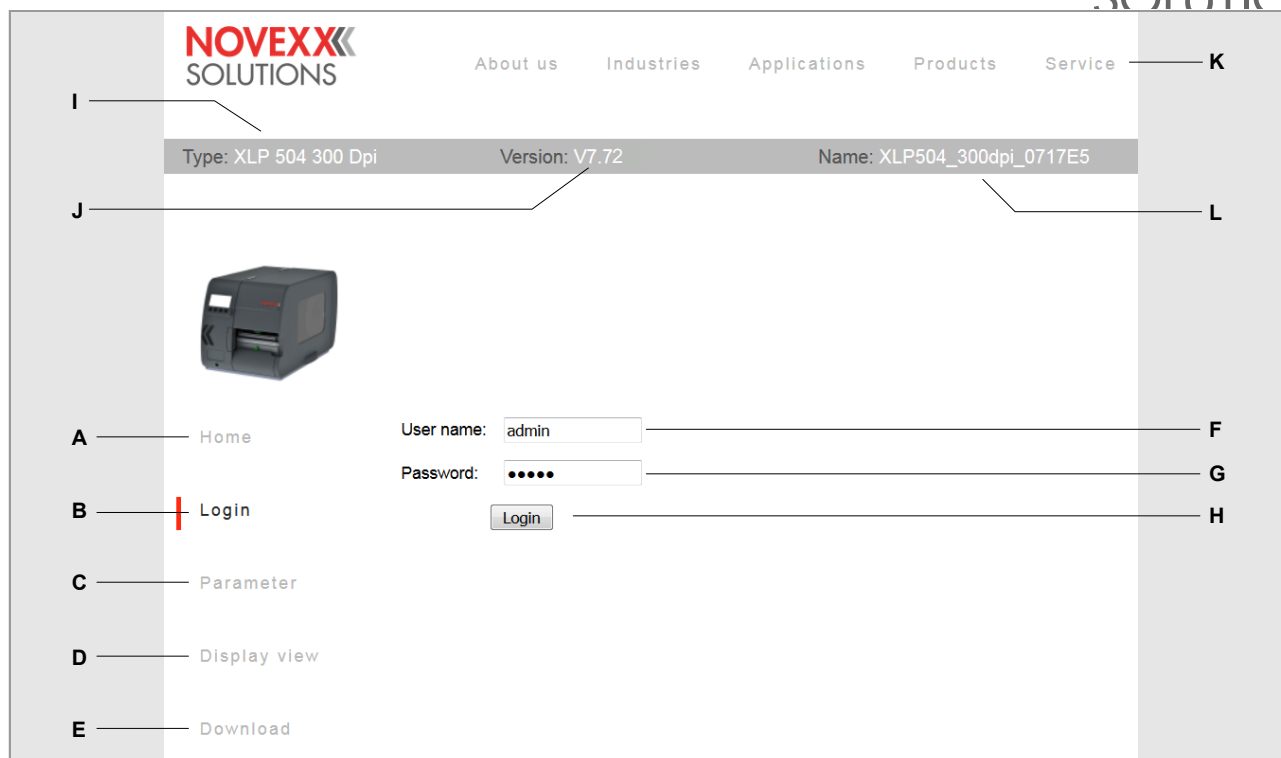
■ This is shown under Interface > Network > IP address (or on the display while the printer is starting up)

2. Start the internet browser.

3. Enter the IP address in the address bar.

■ Without initial zeros (example: IP address = 144.093.029.031, input = 144.93.29.31)

The surface of the web server shows up:



[80] Login dialogue of the web server

- A** Link to the web server home
- B** Opens input fields for user name and password [80]
- C** Calls the parameter menu
Enables settings in the labeller parameter menu to be changed.
- D** Calls the operator panel display
Gives access to all the parameters of the real operator panel
- E** Starts the FTP server in a new browser window
See chapter **FTP server** on page 156.
- F** Input field for user name
Preset: "admin"
- G** Input field for password
Preset: "admin"
The password can be changed under **Interface > Network > Services > WEB server**
- H** Click on this button after entering user name and password
- I** Displays the machine model
- J** Displays the firmware version
- K** Links to the NOVEXX Solutions website
- L** DHCP host name (see **Interface > Network > Services > DHCP host name**)

Logging in to the web server

1. Click on the "Login" link [80B]
2. Enter user name and password [80F, G]
Preset in both cases: admin
3. Click on the "Login" button [80H]

Changing a setting in the parameter menu

Click on the names of submenus and parameters to open them so that you can change the settings they contain.

Example:

Making a change to PRINT PARAMETERS > Material length:

1. Click on "Parameter" link [80C].
2. Click on "PRINT PARAMETERS" link.
3. Click on "Material length" link.
4. A dialog box opens: [81].
5. Enter the required value in the entry field.
6. Click on the "Save" button.

The value is now transferred to the printer.

Change parameter value

Materiallength
 (min: 5.0 mm max: 7900.0
 mm step: 0.1 mm)

100.0

Save

Cancel


[81] Example: Dialog box for entering value for the parameter Print > Material > Material length

i Some parameters trigger a reset of the printer, if they have been changed on the printer via the operator panel. However, if any of these parameters is changed via the web server, the reset does not occur automatically. The changes only come into effect after the next time the printer is reset. In these cases, the "Reset" button [82A] appears after the setting has been changed.

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Type: XLP 504 300 Dpi
Version: V7.72
Name: XLP504_300



Home

Some parameters were changed

Reset

Print	Material
Material Format	
Options Selection I/O Board	
System	
	Foil mode: Thermo transfer
	Punch offset: 0.0 mm
	Materialtype: Endless
	Materiallength: 100.0 mm

[82] Information (A): Changes made to the parameter setting do not come into effect until after a reset.

The virtual operator panel



[83] The virtual operator panel

After the “Display view” link is clicked, an image of the operator panel (= virtual operator panel) appears on the screen [83]. All of the buttons on the real operator panel can also be operated by mouse-click on the virtual operator panel.

The buttons [83A-C] underneath the virtual operator panel are equivalent to key combinations on the real operator panel

- A** “Home” button
Toggles to the „Home“ screen
Same effect as pressing key 1
- B** “View switch” button
Toggles to standalone mode
Equivalent to pressing the keys 2 + 4
- C** “Reset” button
Triggers a reset
Equivalent to pressing the keys 1 + 2 + 3
- D** Status line [84E]

In order to avoid putting an operating person at the machine at risk by sudden starting up of the machine, the virtual operator panel is locked as soon as a button at the machine operator panel is pressed. The status line indicates the current status:

Message	Meaning
No	A user is logged in at the virtual operator panel. The virtual operator panel is unlocked.
„Buttons locked (not logged in)“	No user is logged in at the virtual operator panel. The virtual operator panel is locked.

Message	Meaning
„Buttons locked (User interaction at machine)“	<p>A user is logged in at the virtual operator panel. The virtual operator panel is blocked, because an operator at the machine operator panel has pressed a button</p> <p>Reactivate the virtual operator panel:</p> <p>→ Switch from „Home“ screen to „Ready“ screen at the printer operator panel.</p>

FTP server

Applications

The file transfer protocol (FTP) server (RFC959) enables access to the internal RAM disk of the printer and to a memory medium, if available.

In this way, files (configuration or firmware files) can be stored on the memory medium or the internal RAM disk, or existing files renamed or deleted.

■ The FTP server is multi-session compatible.

■ The FTP server should not be heavily used during a high performance application of the printer, otherwise the performance can be impaired.

Prerequisites

- The printer is connected to a network
- A valid IP address is assigned to the printer (by the network administrator or by a DHCP server)
- Interface > Network > Services > FTP server is set to “On”.
- A FTP client ¹ is installed on the host computer.
- The FTP connection is *not* blocked by a firewall

Establishing a FTP connection

1. Note down the IP address of the printer.

■ The IP address is shown under Interface > Network > IP address (or on the display during the start of the printer)

2. Start the FTP client.

3. Enter the IP address in the address bar.

■ Without initial zeros (example: IP address = 144.093.029.031, input = 144.93.29.31)

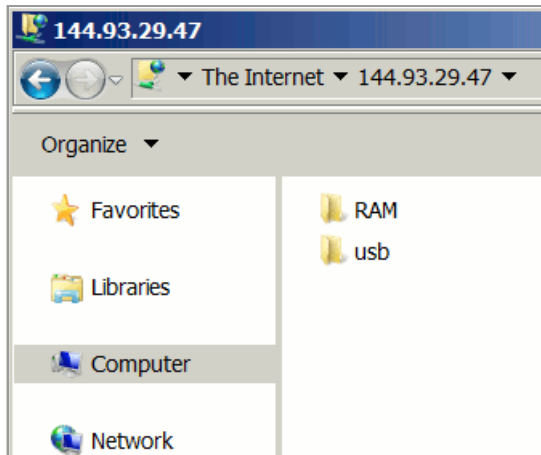
An input field for the user name and password appears.

4. Enter user name and password.

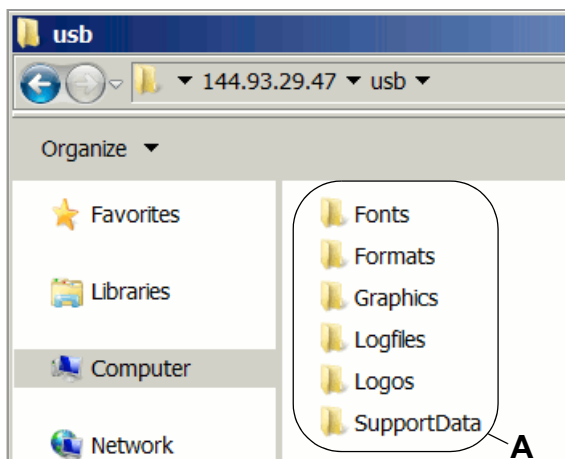
A user name can be chosen at will; preset password = “novexx”

Change the password under Interface > Network > Services > FTP Password (only appears in service mode)

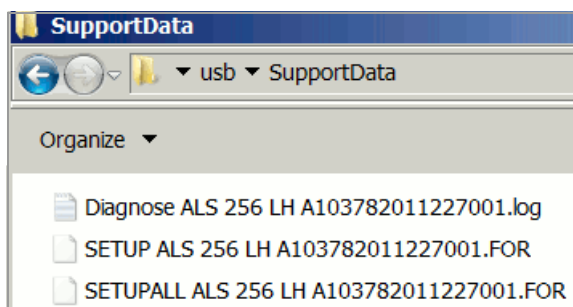
1) e. g. WS-FTP, Internet Explorer, Midnight Commander, Firefox



[84] User interface of the FTP server in the Windows Explorer.
 RAM = internal machine memory; usb = connected USB thumb drive.







[85] Folders on the USB thumb drive (A).



[86] Files in folder „SupportData“.

If the login was successful, separate folders appear in the FTP client, one for the internal RAM disk and one for each connected memory medium [84]:

- RAM:
The content of the RAM disk is without matter for the user.
- USB or SD:
If one of the functions for storing setup or diagnosis data on a memory medium was already processed, the following subfolders can be found here:

Subfolder	Comment
Formats	Location for <ul style="list-style-type: none"> Files containing printjobs (extension *.for) Setup files (see Tools > Diagnostic > Store Parameters) Firmware files to be uploaded in standalone mode (extension *.s3b)
Logfiles	Location for diagnosis files (see Tools > Diagnostic > Store diagnosis and chapter Logfiles directory  on page 134)
SupportData	Location for setup and diagnosis files (see Tools > Diagnostic > Gen.Support Data) [86]
Fonts	Location for fonts (see chapter Fonts directory  on page 133)
Graphics	Location for graphics (see chapter Graphics directory  on page 134)
Logos	Location for logos (see chapter Logos directory  on page 134)

STORING AND TRANSFERRING PARAMETER SETTINGS

Application cases

Sometimes, it will be necessary to reinstall all parameter settings of a printer at a time or to transfer the settings to another printer. In those cases, the operator can save time, money and nerves by loading all the parameter settings completely. The following cases are possible:

- After a printer is being serviced, it is supposed to get the same settings as before.
- The parameter settings of one printer are supposed to be transferred to another printer of the same type.
- Several printers of the same type should be provided with the same settings.

It is advisable to read out and to store the parameter settings completely, to be able to restore them later. To do so, there are two ways:

- Reading out via the *interface* by means of appropriate Easy Plug commands. This requires sound knowledge of the command language Easy Plug and is not further discussed here.
Further information: refer to the Easy Plug manual, topic section „Description of Commands“, commands #!PG and #PC.
- Storing the parameter settings on an *external memory medium* in a text file („setup file“) (see description below).

Storing settings on a memory medium

1. Call parameter Tools > Diagnostic > Store Parameters.
2. Select the memory medium. Confirm the selection.
 ■■■► Selection is only required, if USB thumb drive and SD card are connected.
3. Select a storing option: „With adjust para“ or „Without adj. par“.
 - „With adjust para“
 (Default setting) Parameters, which carry device specific settings, are also saved. Examples for this type of settings are the print head resistance and the sensor settings.
 The relevant parameter names are marked with a „*“ in the setup file. This option is recommended, if the settings are supposed to be reinstalled on the same printer.
 - „Without adj. par“
 Parameters, which carry device specific settings, are not saved.
 This option is recommended, if settings are supposed to be transferred to another printer of the same type.
4. After having chosen the storing option, the default file name is displayed (storing location: directory \FORMATS on the memory medium):
 - Setupall.for for storing option „With adjust para“ (example file see service manual, topic section „Appendix“, chapter „Setup file for XLP 504“)
 - Setup.for for storing option „Without adj. par“
 ■■■► If a file with the given name already exists, it will be overwritten without further inquiry.

Loading settings from a memory medium

All files with parameter settings, which are stored in the \FORMATS directory, can be read out using the standalone mode.

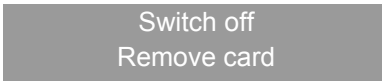
- The file extension must be .FOR, see [Selecting files from a memory medium](#) □ on page 142.

Automatic setup loading

→ Save the setup file as `AUTOSTRT.FOR` in the root directory on the memory medium.

Loading the settings:

1. Switch the printer off.
2. Connect the memory medium.
3. Switch the printer on. The setup loading starts automatically. Display text when the settings are loaded ¹:



Switch off
Remove card

4. Switch off the printer and remove the memory medium.

The settings are loaded now.

1) With firmware version 7.70, the display shows „Firmware Download“ after loading the settings - this is a bug. The settings are nevertheless loaded successfully.

Malfunctions

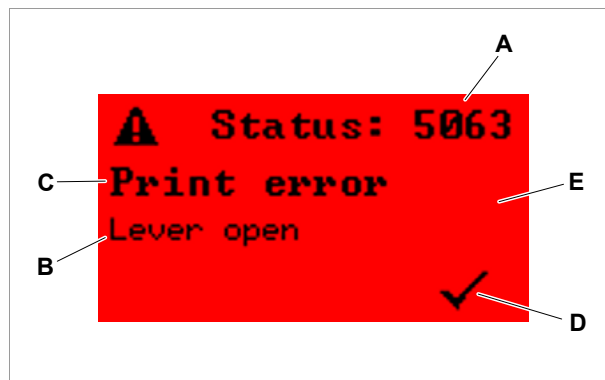
STATUS REPORTS

General information about status reports

Display of status reports

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

The status report shown on the display is assembled as follows:



[87] Appearance of status reports

- A Status number
- B Status text
- C Category
- D Check mark (marks the acknowledgement key)
- E Background color (red = error, yellow = warning)

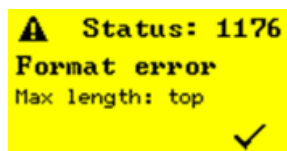
The status number [87A] is the key to an error description that can be found in chapter [Reference of status reports](#) on page 163. The example shows the message with status number **5063** **Lever open** on page 183.

The status can also be queried over the serial interface (see Easy Plug command #!Xn).

Warnings

Background color = yellow

Warnings inform the operator about the occurrence of a certain event at the printer. The message is only displayed for a short time. The printer continues operating without intervention from the user.



[88] Example of a warning

Error messages

Background color = red

Error messages have to be acknowledged by the operator, because the incident endangers the normal operation. The message is displayed until the cause of the disturbance is eliminated and the message is acknowledged by pressing key 4.

Locking error messages are messages that are caused by serious errors. This state can be cancelled by a restart (press the keys 1+2+3) or by switching the printer off.

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 firmware version x.33 or higher. This requires 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 cut button, 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 printjob, which makes the status message appear
- Parameter configuration of the printer, when the error occurs
- Log file of the printjob 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 printjob can be saved on memory card (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

Some status reports are not shown in the list of status reports. They provide developers of the printer firmware and trained service personnel with information about special conditions, particularly with regards to the printer firmware.

If your printer displays status reports which are not included in the following list, please refer to the authorised service office. Make a note of the status number and the circumstances in which the message occurred.

Reference of status reports

1000 No new command

General software error, read chapter [General software errors](#) on page 162.

1001 Parameter table

General software error, read chapter [General software errors](#) on page 162.

1002 Comm. sorting

General software error, read chapter [General software errors](#) on page 162.

1003 Too many slashes

General software error, read chapter [General software errors](#) on page 162.

1004 Slash w/o param.

General software error, read chapter [General software errors](#) on page 162.

1005 2 same commands

General software error, read chapter [General software errors](#) on page 162.

1006 Letter incorrect

General software error, read chapter [General software errors](#) on page 162.

1007 Command incorr.

Unknown command.

→ Check Easy Plug sequence.

1008 Subcomm. incorr.

Unknown letter in a subcommand.

→ Check Easy Plug sequence.

1009 Param. tab inc.

General software error, read chapter C.

1010 #ER x #Q !

One or more illegal commands between #ER and #Q.

→ Check transmitted Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 162.

1011 #ER missing

One or more format commands without leading #ER (self-acknowledging)

→ None. The command is still carried out.

→ Please read the notes in chapter [Easy Plug errors](#) on page 162.

1012 #IM x #Q !

One or more illegal commands between #IM and #Q.

→ Check Easy Plug sequence.

→ Please read the notes in chapter [Easy Plug errors](#) on page 162.

1013 Comm. flag inc.

General software error, read chapter [General software errors](#) on page 162.

1014 Uninit integer

General software error, read chapter [General software errors](#) on page 162.

1015 Uninit float

General software error, read chapter [General software errors](#) on page 162.

1016 Uninit string

General software error, read chapter [General software errors](#) on page 162.

1017 Uninit discr

General software error, read chapter [General software errors](#) on page 162.

1018 Too many discr

General software error, read chapter [General software errors](#) on page 162.

1019 Uninit BCD para.

General software error, read chapter [General software errors](#) on page 162.

1020 Too much image

General software error, read chapter [General software errors](#) on page 162.

1021 Uninit image par

General software error, read chapter [General software errors](#) on page 162.

1022 Too many files

General software error, read chapter [General software errors](#) on page 162.

1023 Uninit File Para

General software error, read chapter [General software errors](#) on page 162.

1024 Com. too long

General software error, read chapter [General software errors](#) on page 162.

1025 Com twice there

General software error, read chapter [General software errors](#) on page 162.

1026 Comm. w/o. flag

General software error, read chapter [General software errors](#) on page 162.

1027 Uninit parameter

Parameter could not be initialised.

→ Acknowledge by pressing key 4.

1028 Parameter uninit

General software error, read chapter [General software errors](#) on page 162.

1029 Param. incorr.

Incorrect parameter in the Easy Plug command.

→ Check Easy Plug sequence.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1030 Command incorr.

Error during the command interpretation.

→ Check Easy Plug sequence.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1031 Too many slashes

Too many parameters between two slashes.

→ Check Easy Plug sequence.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1032 Incorrect char.

Parameter contains an invalid character.

→ Check Easy Plug sequence.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1033 Uninit flash par

General software error, read chapter **General software errors** on page 162.

1034 Uninit restrict

General software error, read chapter **General software errors** on page 162.

1035 Uninit combi

General software error, read chapter **General software errors** on page 162.

1036 Wrong combi para

General software error, read chapter **General software errors** on page 162.

1037 Software error

General software error, read chapter **General software errors** on page 162.

1038 Software error

General software error, read chapter **General software errors** on page 162.

1089 Seek Fkt. Error

General software error, read chapter **General software errors** on page 162.

1090 Incomplete Job

The actual print job was not terminated by the #Q command. In other words, after a start command #ER for a label format follows another #ER command without the first format being terminated by #Q.

→ Confirm by pressing key 4.

→ Terminate the print job with a #Q command.

1091 Wrong var field

An error occurred while interpreting the text string of a variable data field. The error could e.g. be caused by a #YT or a #YB command (Easy Plug). Self-acknowledging error.

→ Check the text strings of variable data fields.

1092 Rename file

General software error, read chapter [General software errors](#) on page 162.

1093 Delete file

File cannot be deleted.

→ Check whether the file name is written correctly; check whether the file is write-protected.

1094 More than 3 figs

General software error, read chapter [General software errors](#) on page 162.

1097 Out of memory

General software error, read chapter [General software errors](#) on page 162.

1099 File end

General software error, read chapter [General software errors](#) on page 162.

1101 Wrong time/date

Easy Plug command #RTC (set realtime clock): invalid date or wrong date/time format.

→ Check command #RTC in the current printjob.

→ Please read the notes in chapter [Easy Plug errors](#) on page 162.

1102 Counter offset

Applies to all Easy Plug commands with counter function, e. g. #YT: A non-valid digit was used in the offset.

→ Check all commands with counter function in the current printjob.

→ Please read the notes in chapter [Easy Plug errors](#) on page 162.

1110 Opening Bracket

General software error, read chapter [General software errors](#) on page 162.

1111 Closing Bracket

General software error, read chapter [General software errors](#) on page 162.

1112 Para: No Value

General software error, read chapter [General software errors](#) on page 162.

1113 No Default Value

General software error, read chapter [General software errors](#) on page 162.

1114 < than boundary>

A sent Easy Plug command contains a value which exceeds the admissible range at the bottom limit. The faulty value is replaced automatically by a default value matching the limits.

Example: #YT109/-1/. The value -1 has been assigned to the parameter d. Admissible for d are the values 0, 1, 2, 3. Therefore, -1 exceeds the value range at the bottom limit.

→ Check the Easy Plug command on admissible values and correct them if necessary.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1115 > than Boundary

A sent Easy Plug command contains a value which exceeds the admissible range at the top limit. The faulty value is replaced automatically by a default value matching the limits.

Example: #YT109/5/. The value 5 has been assigned to the parameter d. Admissible for d are the values 0, 1, 2, 3. Therefore, 5 exceeds the value range at the top limit.

→ Check the Easy Plug command on admissible values and correct them if necessary.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1120 Incorr. logo no.

Logo no. is invalid because it is outside of the address field. (self-acknowledging)

→ Check whether the logo no. has been given as being smaller than 0 (zero) or larger than 255.

1121 Logo exists

Logo already exists.

→ Change the designation of the logo; repeat saving.

1122 Creating logo

General software error, read chapter **General software errors** □ on page 162.

1123 Rename logo

General software error, read chapter **General software errors** □ on page 162.

1124 Logo file

General software error, read chapter **General software errors** □ on page 162.

1125 Delete error

General software error, read chapter **General software errors** □ on page 162.

1126 File creation

Faulty Easy Plug code. A file could not be created. The error may e.g. be caused by a faulty file-name or by too less printer memory.

→ Check all used filenames for length, applied characters, etc. Change the name if faulty.

→ Check the printer for enough memory.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1127 File format

A file name doesn't match the (DOS-) filename convention.

→ Check all used filenames for length, applied characters, etc. Change the name if faulty.

1128 File exists

Faulty Easy Plug code. A file is ought to be loaded into the printer memory via #DF command. The command was used without adding the parameter "O" for "Overwrite", but a file already exists under the given name.

→ Rename one of both files or set the parameter "O".

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1130 Float overflow

Number of figures is too high for a floating comma variable.

→ Reduce the number of figures.

1131 Logo cache full

A logo or several logos was/were sent which is/are too huge for the logo buffer.

→ Reduce the logo size.

1140 Line too long

Error during conversion from EPT into BIN: permitted line length exceeded.

→ Reduce line length.

1141 Para. incorr. BI

Error during processing of a Bit Image parameter.

→ Acknowledge by pressing the on-line button.

1150 Integer overflow

Too many figures for an integer variable.

→ Reduce the number of figures.

1160 String too long

A string parameter exceeds the maximum string length of 256 characters (1024 characters in 2-dimensional bar codes respectively).

→ Reduce the number of characters in the string.

1170 X Pos > width

Faulty Easy Plug code. X position exceeds permitted maximum value.

Result: The previously set print offset is retained.

→ Reduce value for X position.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1171 X Pos < zero

Faulty Easy Plug code. Value for X position < zero.

Result: The previously set print offset is retained.

→ Check value for X position for signs.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1172 Y Pos > length

Faulty Easy Plug code. Y position exceeds the label length.

Result: The previously set print offset is retained.

→ Reduce value for Y position.

→ Select a longer label.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1173 Y Pos < zero

Faulty Easy Plug code. Value for Y position < zero.

Result: The previously set print offset is retained.

→ Check value for Y position for signs.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1174 Max width: right

Maximum label width, right, reached. Elements such as character, line or logo do not fit into the physical print format (self-acknowledging)

Result: Only elements which completely fit into the print format are printed.

→ Alter value for width or position of elements.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1175 Max width: left

Faulty Easy Plug code. Maximum label width, left, reached. Elements such as character, line or logo do not fit into the physical print format (self-acknowledging)

Result: Only elements which completely fit into the print format are printed.

→ Alter value for width or position of elements.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1176 Max length: top

Faulty Easy Plug code. Maximum label length, top, reached.

→ Correct label layout: Position the drawing elements in a way that they fit on the label or modify the label length.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1177 Max length: bot.

Faulty Easy Plug code. Maximum label length, bottom, reached.

→ Correct label layout: Position the drawing elements in a way that they fit on the label.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1178 x Dots < zero

Bit Image:

→ Switch the printer off and after 30 seconds on again.

1200 GetRLE reset st

(number of bytes) * (number of lines) does not correspond to the file length.

→ Switch the printer off and after 30 seconds on again.

1201 GetRLE error st

GetRLE byte has error status.

→ Switch the printer off and after 30 seconds on again.

1210 itoa Short Strin

General software error, read chapter **General software errors** □ on page 162.

1240 New FS>E

General software error, read chapter **General software errors** □ on page 162.

1241 New Read Pointer

Faulty memory assignment for print jobs.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1242 New FE in job

Faulty memory assignment for print jobs.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1243 New delete order

Faulty memory assignment for print jobs.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1244 New wrong pos.

Faulty memory assignment for print jobs.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1245 New no space

Faulty memory assignment for print jobs.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1246 New HP no space

Faulty memory assignment for print jobs.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1247 Out of memory

Faulty memory assignment for print jobs.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1260 TimeDate string

General software error, read chapter **General software errors** on page 162.

1270 #-comm. invalid

General software error, read chapter **General software errors** on page 162.

1272 Wrong #!..

Faulty Easy Plug code. Faulty use of the immediate command "#!A..". The specified parameter value exceeds the admissible value range (0 to 31).

→ Specify an admissible parameter value.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1273 Wrong #!C..

Faulty Easy Plug code. Faulty use of the immediate command "#!C..". The specified parameter value exceeds the admissible value range (A, F).

→ Specify an admissible parameter value.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1276 #!P wrong number

Faulty Easy Plug code. Faulty use of the immediate command "#!P..". The specified parameter value exceeds the admissible value range (0 to 31).

→ Specify an admissible parameter value.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1277 Wrong #!S..

Faulty Easy Plug code. Faulty use of the immediate command "#!S..". The specified parameter value exceeds the admissible value range (P, R).

- Specify an admissible parameter value.
- Please read the notes in chapter **Easy Plug errors** on page 162.

1278 Wrong #!X..

Faulty Easy Plug code. Faulty use of the immediate command "#!X..". The specified parameter value exceeds the admissible value range (S, B, P).

- Specify an admissible parameter value.
- Please read the notes in chapter **Easy Plug errors** on page 162.

1279 #!X wrong number

Faulty Easy Plug code. Faulty use of the immediate command "#!X..". The specified parameter value exceeds the admissible value range.

- Specify an admissible parameter value.
- Please read the notes in chapter **Easy Plug errors** on page 162.

1282 Spooler FB > L

General software error, read chapter **General software errors** on page 162.

1285 #!-comm. incorr.

Faulty Easy Plug code. Faulty use of the immediate command "#!..!". The specified letter is unknown.

- Specify an admissible letter.
- Please read the notes in chapter **Easy Plug errors** on page 162.

1290 Label limit

Faulty Easy Plug code. Value for x or y position exceeds the label limit.

- Reduce the value for the x or y position.
- Please read the notes in chapter **Easy Plug errors** on page 162.

1291 Draw field

Faulty Easy Plug code. Function call, drawing object, unsuccessful.

- Please read the notes in chapter **Easy Plug errors** on page 162.

1300 Invalid Command

General software error, read chapter **General software errors** on page 162.

1301 Table full

General software error, read chapter **General software errors** on page 162.

1310 Wrong Field ID

The error can have several causes.

- Please read the notes in chapter **Unspecific errors** on page 162.

1320 No Default Value

Faulty Easy Plug code.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1321 Bar Code Object

Faulty Easy Plug code regarding the declaration of a bar code.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1322 Logo Object

Faulty Easy Plug code regarding the declaration of a logo.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1323 Line Object

Faulty Easy Plug code regarding the declaration of a line.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1324 Rectangle Object

Faulty Easy Plug code regarding the declaration of a rectangle.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1325 Truedoc Object

The error can have several causes.

→ Please read the notes in chapter **Unspecific errors** on page 162.

1326 Fix Field Creati

Faulty Easy Plug code regarding the declaration of a field.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1327 Update Field Cre

Faulty Easy Plug code regarding the declaration of a field.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1328 Var Field Creati

Faulty Easy Plug code regarding the declaration of a field.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1329 Count Field Crea

Faulty Easy Plug code regarding the declaration of a counting field.

→ Please read the notes in chapter **Easy Plug errors** on page 162.

1330 Create clk. field

General software error, read chapter **General software errors** on page 162.

1331 Field type inv.

Invalid field type

→ Acknowledge by pressing key 4.

1332 Field length inc.

General software error, read chapter **General software errors** on page 162.

1333 Logo not there

Selected logo does not exist.

→ Check file name / existence of the logo.

1334 #YV Data incorr.

Illegal entries for a #YV field (variables data field).

→ Acknowledge by pressing key 4.

→ Correct data.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1335 #YV Field cont.

Content of the #YV field (variables data field) could not be pasted.

→ Acknowledge by pressing key 4.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1336 #YV no. incorr.

#YV field (variables data field) with the given no. not found.

→ Acknowledge by pressing key 4.

→ Check the number of the #YV field.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1390 Web width zero

The printer was set to printing several label rows (Easy Plug command #ER, $n > 1$); but the label width was by fault set to zero ($b = 0$).

→ Correct the #ER command regarding the setting of parameter b.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1391 Web > Width

The printer was set to printing several label rows (Easy Plug command #ER, $n > 1$); but both or one of the parameters n and b are set in a way that $n * b$ (label row width * no. of rows) exceeds the material width.

→ Correct the #ER command regarding the setting of parameters n and b.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1392 Job memory full

The error can have several causes.

→ Please read the notes in chapter **Unspecific errors** □ on page 162.

1393 Job struct creat

The error can have several causes.

→ Please read the notes in chapter **Unspecific errors** □ on page 162.

1394 Wrong Canceling

General software error, read chapter **General software errors** □ on page 162.

1395 Label too wide

A printjob contains an #IM-command which sets the label width to a measure exceeding the maximum print width. The maximum print width depends on the printer type.

Refer to chapter „Technical specifications“ for the maximum label width.

→ Reduce the label width set by the #IM-command in the concerned print job, until the label width matches the maximum print width.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1396 Label too long

Label length setting exceeds the maximum label length. The maximum label length depends on the memory configuration of the printer.

The info-printout „Memory Status“ shows among other data the maximum label length. Read more about info-printouts in chapter „Parameters“.

→ Reduce the label width setting.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1397 Label too short

The label length defined in the #IM command is smaller than the minimum admissible length. The label length is set to the minimum value.

→ Correct the length value in the label layout definition.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1398 Label too small

The label width defined in the #IM command is smaller than the minimum admissible width. The label width is set to the minimum value.

→ Correct the width value in the label layout definition.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1404 UTF8 data wrong

Character code > 0xffff

→ Check/change the character code.

1470 X-Offset

The x-position of a layout element (graphics, text, ...) is beyond the label margin. The element is shifted automatically to the first admissible position at the correct side of the margin.

→ Check the x-positions of the layout elements and change them, if necessary.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1471 Y-Offset

The y-position of a layout element (graphics, text, ...) is beyond the label margin. The element is shifted automatically to the first admissible position at the correct side of the margin.

→ Check the y-positions of the layout elements and change them, if necessary.

→ Please read the notes in chapter **Easy Plug errors** □ on page 162.

1501 Unknown ZPL Cmd

Error level1

An uninterpretable command was encountered.

→ Check, if the printjob was proceeded correctly. If yes, ignore the message, if no, modify the print-job.

1502 ZPL comand tab.

Error level1

General software error, read chapter **General software errors** on page 162.

1503 Filename Too Long

Error level1

Filename is too long.

→ Rename the file with a shorter name.

1504 Param > Max

Error level1

Parameter exceeds the maximum value defined

→ Shorten the parameter.

1505 Param < Min

Error level1

Parameter is shorter than the admissible minimum value allowed.

→ Modify the parameter.

1506 No Previous

Error level1

Graphics command is to set current row data to previous row data, but previous row data doesn't exist.

1507 Not enough data

Error level1

Data for graphics command is not enough.

→ Check and modify graphics data.

1508 String Too Long

Error level1

String characters exceeds the maximum number of characters which the particular string parameter can take.

→ Check and modify the command.

1509 Wrong Byte Cnts

Error level1

The row size or total size parameters is not valid (equals 0). Occurs when download graphic or download font commands in process.

→ Check and modify the command.

1510 Wrong Param

Error level1

Control characters are not allowed for discrete parameter (single letter parameter).

→ Check and modify the command.

1511 Bar Parm Error

Error level1

Parameters to a barcode command is wrong or does not conform with specs.

→ Modify the bar code command.

1512 Code128 Mode Err

Error level1

Code128 barcode command specifying mode type other than 'AUTO'.

→ Modify the bar code command.

1513 Wrong Mode

Error level2

Coda block barcode command specifying mode type other than 'F'.

→ Modify the bar code command.

1514 ^BX Parm Err.

Error level2

Data Matrix bar code command specified an escape sequence character. This is not supported in this printer.

→ Modify the bar code command.

1515 Conv to ECC200

Error level1

Data Matrix barcode command specified non ECC200 level. Program is attempting to convert to ECC200.

→ Modify the bar code command.

1516 Bad Drive: x

Error level2

The selected drive letter („x“) is not valid. (We support only 'R' and 'B').

→ Select a valid drive letter.

1517 Mask String: x

Error level2

The mask string used in ^SF command is not supported.

→ Modify the print job.

1518 Bad Format: x

Error level2

The graphic format selected is not supported by ZPL II Emulation (Compressed binary and PNG format).

→ Convert graphic into a supported format.

1519 Cmd Init Error

Error level1

→ Read chapter **General software errors** on page 162.

1520 Unsupported Cmd

Error level1

Non critical commands that is not supported by this printer.

→ Check and modify the commands in the printjob.

1521 Unsupported: x

Error level2

Critical commands that is not supported by this printer.

→ Check and modify the commands in the printjob.

1522 Bad Char Set x

Error level2

The character set selected by ^CI command is not supported.

→ Replace the character set by a supported set.

1523 Cmd Parm Error

Error level1

Error encountered while parsing command parameter.

→ Check and modify the commands in the printjob.

1524 d/mm not chg x

Error level2

Command attempting to lower print density assuming a 200 dpi printer.

→ Check and modify the commands in the printjob.

1526 Can't Off CV

Error level1

Command attempting to turn off barcode validations.

→ Check and modify the commands in the printjob.

1527 Offset illegal

Error level2

RTC command specified a clock offset not supported by this printer (possibly a negative offset).

→ Correct the command.

1528 Language illegal

Error level2

Language specified by RTC command is not English or German.

→ Correct the command.

1529 Invalid Prn Mode

Error level1

Print modes other than cutter mode are selected (Tear-off, Rewind or Peel-off modes in ^MM command).

→ Correct the command.

1530 Inc free str mem

Error level2

Not enough free store memory.

→ Increase the value set in System > Memory > Free store size (at least 2048 Kbytes).

1531 Inc RAM disc

Error level2

Not enough RAM disc.

→ Increase the value set in System > Memory > Ram disk size (at least 2048 Kbytes).

1532 No Fixfont

Error level2

No fixfonts in Flash.

→ Load fixfont.

1533 No Speedo Font

Error level2

No Speedo font in Flash.

→ Load speedo font.

1534 ^XA missing

Error level1

Command should be placed inside of ^XA...^XZ pair.

→ Modify the printjob.

1535 ^XZ missing

Error level1

Command should be placed outside of ^XA...^XZ pair.

→ Modify the printjob.

1561 Wrong Font Format

Format error in a Fixfont file.

→ Check font file.

2000 Double var name

Attempt to define a variable with an already existing name.

→ Choose another name for the variable.

2002 Var. data length

The maximum allowed length of a variable was exceeded.

→ Correct the variable length.

2003 Expr. bracket

The number of open and close brackets in the expression is not equal.

→ Check the brackets in the expression and correct their number.

2004 Exp. quotemark

The number of quotemarks in the expression is not a multiple of two.

→ Check the quotemarks in the expression and correct their number.

2005 Exp. comma pos.

Unexpected comma in the expression.

→ Check the syntax of the expression regarding commas.

2006 Exp.functionname

A wrong function name is used in the expression.

→ Check, if the function names used in the expression are spelled correctly and if the functions exist. Change the function name.

2007 Exp.fct.paratype

A wrong parameter type in an expression was detected.

Example: SubStr("Text",0,"A") would provoke this message, because "A" is not a number.

→ Check the expressions. Correct the wrong expression.

2008 Exp.fct.paraCnt

Wrong number of function parameters in the expression.

→ Check the expressions. Correct the wrong expression.

2009 Exp. name wrong

A not defined variable name is used in an expression.

→ Check the variable names. Correct the spelling if necessary or define a new variable.

2010 Fct. para value

The error is caused by the Easy Plug function chr(). The argument, which was assigned to the function, exceeds the admissible value range 0...255.

→ Change the argument (details see Easy Plug manual)

2111 Invalid Date

Invalid date specification in a string.

Example: Function call DayOfYear(„31“,„6“,„2005“) would produce this error message (because the date did not exist).

→ Correct the date specification.

See Easy Plug Manual, topic section "Description of commands", chapter "Easy Plug variables".

3000/3003/3006/3012/3015 Com x Overrun

Receive error at the RS232 interface COMx (x = [1...5]).

→ Acknowledge by pressing key 4.

3001/3004/3007/3013/3016 Com x Parity

Receive error at the RS232 interface COMx (x = [1...5]).

→ Acknowledge by pressing key 4.

→ Check parameter setting at printer and host.

3002/3005/3008/3015/3017 Com x Frame

Receive error at the RS232 interface COMx (x = [1...5]).

- Acknowledge by pressing key 4.
- Check parameter setting at printer and host.

3010 Spooler Overflow

Fault which is caused by a faulty handshake at an interface. The consequence is an overflowing data buffer at the printer, because the host doesn't stop to send data to the printer.

- Acknowledge by pressing key 4.
- Check the connections of the data line, especially the signal wires belonging to the handshake.
- Check the interface settings, especially the handshake settings.

3011 Send buffer full

The send buffer is full. This error may happen, if the printer status was requested several times (#!Xn), but the status reply was not read out.

- Make sure that the status reply is read out.

5000 Bus device

One of the devices connected to the I2C bus (e.g. output stage boards) does not respond. This message appears mostly first in a sequence of two or three status messages, which help to isolate the error source.

- Acknowledge by pressing key 4.
- Switch printer off and back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

EXAMPLE:

The parameter Options > Selection > Periph. device is set to "Cutter" without an output stage board for a cutter being installed. The following status messages appear one after another:

Status: 5000
Bus device

Generally tells, that something went wrong with I2C bus communication

- Acknowledge the status message.

Status: 5005
Messer

Either no output stage board is prepared to drive a cutter, or the I2C bus data cable is not connected to the output stage board (this message appears only in one of those two cases, alternative status messages see tab. 22)

- Acknowledge the status message.

Status: 5020
I2C Timeout 4

Time limit exceeded without getting an answer from device no. 4 (4 = Cutter, see tab. 24) (alternative status messages see tab. 23)

- Acknowledge the status message

One of the following status messages may follow second:

Status	Missing output stage for the following device:
5005 Knife-fault	Cutter motor
5006 Head-fault	Print head liftmotor
5008 Ribbon end	Ribbon motor

[Tab. 22] Those status messages indicate, that the device is not connected to the I2C bus.

Third may follow one of the status messages listed below:

Status
5020 I2C Timeout xx
5021 I2C Conf. xx
5022 I2C Busy xx
5023 I2C LAB xx
5024 I2C BER xx
5025 I2C Polling xx

[Tab. 23] Status messages, which help to further locate the I2C bus error.
xx = Device ID of the concerned device (see tab. 24).

Nr	Device
0	CPU
4	Peripheral motor
8	Rewinder (internal)
15	I/O board
16	EEPROM
17	Realtime-clock

[Tab. 24] Assignment of device IDs as used in status messages related to the I2C bus.

5001 No gap found

No gap found or several blank labels fed.

- Acknowledge by pressing key 4.
- Check the print mask for gap definition (material length).
- Check whether the correct material has been inserted.
- Check that the photoelectric switch is clean.
- Check material feed and position of photoelectric switch.

5002 Material end

Material end. Material no longer in the gap LS.

1. Press key 4 in order to acknowledge the status report.
2. Insert material and check the position of the photoelectric switch, correct if necessary.
3. Press key 4. Processing of the job continues, gap is reinitialised.

5003 Lever open

The print head pressure lever was opened, during:

- the feeding of material or
- printing.

The error message is automatically acknowledged with the closing of the print head pressure lever.

→ Close the cover or print head lever respectively.

5004 Rewinder mat. tear

Label material at the backing paper rewinder is torn off.

(XLP 504 with rewinder) The backing paper sleeve was too large during material initialization; the backing paper web could not be tightened.

→ Acknowledge the status message.

→ Secure label material to the rewinder.

5005 Knife-fault

Faults at the cutter („Cutter 2000“ or „TCS“). The blade cannot move back into its home position.

→ Check, what prevents the blade from moving into its home position.

5006 Head-fault

Print head lifting malfunction (head sensor).

→ Check whether dirt is preventing the head contact lever from moving freely, if necessary clean.

→ If not successful, call Service.

5008 Ribbon end

When using direct thermal printing:

→ Check whether the parameter Print > Material > Foil mode. is set to "Thermal printing".

When using thermal transfer printing: The ribbon roll is exhausted.

→ Insert a new ribbon roll.

5020 I2C Timeout xx

Timeout error during communication via the I2C bus with the device xx (see tab. 24).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

5021 I2C Conf. xx

Confirmation error during communication via the I2C bus with the device xx (see tab. 24).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

5022 I2C Busy xx

Error during communication via the I2C bus with the device xx (see tab. 24). Device always reports that it is busy.

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

5023 I2C LAB xx

Error during communication via the I2C bus with the device xx (see tab. 24).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

5024 I2C BER xx

Error during communication via the I2C bus with the device xx (see tab. 24).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

5025 I2C Polling xx

Polling error during communication via the I2C bus with the device xx (see tab. 24).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

5026 Motorprotect CPU

The motor driver board (output stage board) is overheated or defective.

→ Switch printer off and then back on again after 30 sec.

If the error message continues to appear:

→ Replace the motordriver board.

5028 P.supplyoverheat

The temperature inside of the power supply exceeded the admissible range.

→ Let the power supply cool down for some minutes.

5029 I2C checksum xx

During I2C communication with device xx occurred a checksum error.

xx = I2C device number (see tab. 24).

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

5059 Stacker fail

At least one of the following incidents occurred at the optional cutter-stacker (TCS):

The stacker is full.

→ Clear the stacker.

The protection cover is open.

→ Close the cover.

There is no label material in the material inlet of the stacker.

→ Insert material or clear the material jam, if any.

5061 Dispenser motor

The output stage board for the dispenser motor is not present or defective.

→ Press key 4 to acknowledge.

→ Check the output stage board for the dispenser motor and eventually exchange it.

5062 Disp. lift motor

The output stage board for the dispenser lift motor is not present or defective.

→ Press key 4 to acknowledge.

→ Check the output stage board for the dispenser lift motor and eventually exchange it.

5063 Lever open

The print head lever is not closed. Opening the lever causes the immediate deletion of all potentially queued status messages (e. g. ribbon end) and display of the "Lever open" message. Closing the lever automatically acknowledges the status message.

→ Close the print head lever.

5064 Rewinder full

Happens with dispenser version printers: Shows up, when the diameter of the rewinded backing paper roll has become too large.

- Clear the rewinding mandrel.
- Press key 4 to acknowledge.

5100 Printengine lock

Printengine error (occurs only at devices with Gen. 3 electronics).

- Acknowledge by pressing key 4.
- Switch device off and on again.

If the message continues to appear:

- Contact service technician.

5101 Headadjust error

Error during the running of the "Head Alignment" service function.

- Acknowledge by pressing key 4.
- Contact service technician.

5110 Foil low

The diameter of the foil roll fell below the set warning diameter (see System > Print > Foil end warning).

The message is caused by a foil warning in addition with the following setting: System > Print > Foil warn stop. = „On“

- Acknowledge by pressing key 4.

5200 Home position

The applicator did not reach its home position within the given time frame.

- May the applicator move unhindered? – remove any obstacles.

5201 Touch down

The applicator did not reach its touch down position within the given time frame.

- Check if any product to be labeled was present at all, respectively if the applicator hit the product.

5203 Touch down sens.

Der (die) Touchdown-Sensor(en) wurde(n) bereits vor dem Applizievorgang betätigt.

- May the applicator move unhindered? – remove any obstacles.

5222 V x for int. rewinder required

The installed firmware version of the BLDC output stage doesn't match the installed printer firmware.

Firmware version of the BLDC output stage is *too low*:

- Acknowledge the status message; update firmware to the indicated version.

Firmware version of the BLDC output stage is *too high*:

- The status message will get automatically acknowledged after a few seconds; the firmware version doesn't have to be changed (because it's backward compatible).

5223 V x for int. peripheral driver required

The installed firmware version of the output stage for peripheral devices doesn't match the installed printer firmware.

Firmware version of the output stage for peripheral devices is *too low*:

→ Acknowledge the status message; update firmware to the indicated version.

Firmware version of the output stage for peripheral devices is *too high*:

→ The status message will get automatically acknowledged after a few seconds; the firmware version doesn't have to be changed (because it's backward compatible).

5300 BLDC EEPROM err.

General EEPROM read/write error on the BLDC driver board (XLP 504 with internal rewinder).

→ Switch printer off and then on again after 30 seconds. If the status message continues to appear, change the BLDC board.

5301 BLDC rewinder Ø

The stored rewinder diameter exceeds the admissible range (XLP 504 with internal rewinder).

→ Acknowledge the status message.

→ Switch to offline mode and feed the label web for approx. 200 mm. This re-initializes the rewinder diameter.

■ If the printer is switched off and on again without prior initialization, the status message will be displayed again.

5500 Unknown

General software error, read chapter [General software errors](#) on page 162.

5501 General

General software error, read chapter [General software errors](#) on page 162.

5590 Odd hex string

A character string was sent to the transponder (Easy Plug command #RFS) and was ought to be interpreted hexadecimal (use #RFS with parameter "B"). For this, the character string must consist of an equal number of characters. This was not the case, what triggered this error message.

→ Send an equal number of characters.

5600 Job without #Q

The print job misses the declaration of the print amount (Easy Plug command #Q).

→ Insert a #Q command with the print amount.

5601 Job memory full

The job memory for Easy Plug printjobs is full.

→ Reduce the reserved memory for one or more of the following memory areas:

- Free store size (System > Memory > Free store size)
- RAM disk size (System > Memory > Ram disk size)
- Font download size (System > Memory > Font downl. area)

→ If there are already some printjobs in the printer queue: wait until those are processed.

6000 Param. incorrect

Novram check sum error.

→ Check the setting of the print head resistance (parameter System > Hardware Setup > Head resistance) , before you press key 4 – possibly the value is faulty.

→ Confirm error by pressing key 4. All parameters are set back to the factory settings.

6001 Nov. prog. err.

Error during allocation of main memory.

→ Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

6002 New prog. vers.

Occurs after firmware update. The printer hereby reports that new firmware is available.

→ Confirm by pressing key 4. All parameters are set back to the factory settings.

6003 Memory error

Error during partitioning of the main memory.

→ Switch printer off and back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

6005 Fixfont data

Defective fixfonts.

→ Load the firmware new.



Refer to the service manual, chapter „Firmware“.

6006 Speedofont data

Defective speedo fonts.

→ Load the firmware new.



Refer to the service manual, chapter „Firmware“.

6007 Print ctrl. stop

The print control doesn't start, what means that the printer doesn't finish the initialization phase after switching it on.

→ Read in the service manual, what to do:



Refer to the service manual, chapter „Firmware“.

6008 ZPL Fixfont data

Defective fixfonts.

→ Load the firmware new.



Refer to the service manual, chapter „Firmware“.

6009 ZPL Speedo data

Defective speedo fonts.

→ Load the firmware new.



Refer to the service manual, chapter „Firmware“.

6010 Printengine soft

General software error, read chapter **General software errors** on page 162.

6030 Param. checksum

Wrong parameter checksum.

→ None. The message is merely informativ.

6031 New Parameters

By loading a new firmware version, some new parameters have been added to the parameter menu.

→ None. The message is merely informativ.

6101 No sensor found

Error during the running of the "Sensor Test" service function.

→ Acknowledge by pressing key 4.

→ Contact service technician.

6200 Filesystem regis

General software error, read chapter **General software errors** on page 162.

6201 File sys. format

Error during formatting of the RAM disk or the memory card.

6202 Drive open

Accessing the memory card failed.

→ Format the memory card using the PC card drive. Try again to write onto the card.

→ Try another memory card.

6203 Filesystem close

Accessing the memory card failed.

→ Format the memory card using the PC card drive. Try again to write onto the card.

→ Try another memory card.

6204 Disk directory

Work directory cannot be opened.

→ Acknowledge by pressing key 4.

→ Check designation existence of the work directory.

6205 Write disk

Error during writing on RAM disk or memory card.

→ Acknowledge by pressing key 4.

6206 Read disk

Error during reading from RAM disk or memory card.

→ Acknowledge by pressing key 4.

6207 No file card

No memory card found.

- Acknowledge by pressing key 4.
- Check, if a memory card is inserted.
- If the memory card was inserted after switching on the printer: switch the printer off and on again.

6208 Drive xx full

Writing on drive xx failed, because there is not enough free space.

- Acknowledge by pressing key 4.
- Free space on the drive.

6300 Out of memory

Not enough free memory available, to load additional print jobs. The job buffer is completely filled with print jobs.

- Delete spooler using the parameter SPECIAL FUNCTION > Delete spooler.

6301 Incomplete job

The Easy Plug interpreter failed interpreting a certain print job to the end. The print job has possibly not been terminated by a #Q-command.

- Check, if the print job is properly terminated with #Q.

6310 Centr. Timeout

The Easy Plug command #!Xn triggers a status acknowledgement via centronics Interface. But the PC doesn't pick up the supplied data.

- Check the data line connecting printer and PC.

6311 Centr. Timeout

The Easy Plug command #!Xn triggers a status acknowledgement via centronics Interface. But the PC doesn't pick up the supplied data.

- Check the data line connecting printer and PC.

8001 Shared Memory

General software error, read chapter **General software errors** □ on page 162.

8002 Stream Buffer

General software error, read chapter **General software errors** □ on page 162.

8103 TrueDoc Font

Error: font with the number given is not contained in the system.

- Check font no., if necessary select another font.

8104 Speedo alloc

Fault while initializing the speedo fonts.

- Load firmware new.



Refer to the service manual, chapter „Firmware“.

8105 Load TrueType

Damaged font file.

- Reload font file, if necessary select another font.

8106 Fonttype wrong

General software error, read chapter [General software errors](#) on page 162.

8107 Character set

General software error, read chapter [General software errors](#) on page 162.

8108 Symbol set

General software error, read chapter [General software errors](#) on page 162.

8109 TT-specifications

General software error, read chapter [General software errors](#) on page 162.

8110 Unknown char.

Character is not included in the character set (character set does not support all characters).

→ Select another character / character set.

8111 Stream type

General software error, read chapter [General software errors](#) on page 162.

8112 Font not supp.

The applied Truetype font is not supported by the system. Text, which uses this font, is ignored.

→ Use another Truetype font.

8200 Fixfont number

Incorrect fix font no.

→ Check fix font no., alter if necessary.

8201 Font downl. full

The font download buffer is full.

→ Allocate more memory for the download buffer using the parameter `System > Memory > Font downl. area`.

→ Rename some speedo-fonts on the CompactFlash-Card, you actually don't use. All speedo-fonts named fontxxx.spd (xxx = font no.) are being loaded into the font download buffer while system startup.

For Details refer to the manual „Cards“, subject section „Using cards“, paragraph „memory card“.

8202 Font deleted

Attempt to access a font, which is no longer available on memory card or on RAM disk (font was deleted or renamed).

→ Check the label layout. Load the not available font or use another, available, font.

8300 Bar code corr.

Error: a bar code correction factor greater than +/- 25% has been selected.

→ Reduce correction factor.

8301 Bar code data

Incorrect bar code data. The bar code data is not permitted for the selected bar code type.

→ Use data permitted for the bar code type.

8302 Barcode checksum

Error during calculation of the bar code check sum.

→ Check transmitted data.

→ If the error continues to occur please contact the manufacturer. Send the transmitted Easy Plug data.

8303 Bar code sample

Error during calculation of the bar code sample.

→ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

8304 Bar c. plain-copy

Error during integration of the plain-copy line in the bar code sample.

→ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

8305 Bar code print

Error during calculation of the bar code print image.

→ Acknowledge by pressing key 4.

→ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

8306 Plain-copy len.

Illegal: bar code plain-copy line has more than 300 characters.

→ Reduce line length.

8307 Readline dist.

General software error, read chapter **General software errors** on page 162.

8308 Bar code ratio

Illegal bar code ratio.

→ Select another ratio.

8309 Module range

Maximum range of the bar code module exceeded.

→ Reduce module range.

8310 Bar code element

Bar code element exceeds the maximum permitted size of 253 dots (21 mm).

→ Reduce size of the bar code element.

8311 Barcode table

General software error, read chapter **General software errors** on page 162.

8400 PDF417 ECC

Bar code PDF417: incorrect ECC level (Error Correction Level).

→ Alter ECC level.

8401 PDF417 Lines

Bar code PDF417: illegal number of lines.

→ Alter number of lines.

8402 PDF417 Columns

Bar code PDF417: illegal number of columns.

→ Alter number of columns.

8403 PDF417 Style

Bar code PDF417: incorrect style.

→ Alter style.

8404 PDF417 Command

Bar code PDF417: incorrect command.

→ Acknowledge by pressing the on-line button.

→ Check and alter commands.

8405 PDF417 Size

Bar code PDF417: incorrect size.

→ Alter size.

8406 PDF417 Details

Bar code PDF417: incorrect details.

→ Alter details.

8407 PDF417 Coding

Bar code PDF417: coding error.

→ Acknowledge by pressing key 4.

8500 Code 25Int len.

Bar code Code 25 Interleaved: input line too long.

→ Shorten input line.

8501 Postcode length

Bar code postcode: illegal data length.

→ Check length of the transmitted data and set it to the permitted length.

8600 EAN Length

Bar code EAN: illegal data length.

→ Check length of the transmitted data and set it to the permitted length.

8601 UPCE Numbers sys.

Error: First data character of the transmitted data is not 0 or 1.

→ Alter first data character to 0 or 1.

8705 IDM rows/columns

The input data does not match the given matrix or the number of rows/columns is invalid.

→ Change the number of rows/columns or the input data.

8760 EAN128 field len

The number of data after a data identifier does not correspond to the definition for this data identifier.

→ Change the number of data.

8761 EAN128 Data type

The data type (alphanumeric, numeric) after a data identifier does not correspond to the definition for this data identifier.

→ Change the data type.

8762 EAN128 Ident.

Invalid data identifier.

→ Change the data identifier.

8800 Maxicode Mode

Maxicode: faulty mode

→ Change mode.

8801 Maxicode Sys no

Maxicode: incorrect system no.

→ Correct system no.

8802 Maxicode Zipcode

Maxicode: incorrect zipcode.

→ Correct zipcode.

8803 Maxicode Class

Maxicode: faulty class code.

→ Correct class code.

8804 Maxi. Sec. mess.

Maxicode: secondary message has an illegal length.

→ Correct length of secondary message.

8805 Maxicode Country

Maxicode: faulty country code.

→ Correct country code.

8830 Cod49 Datalength

The user data string is too long. Not all characters can be coded in the bar code. The bar code is not printed.

→ Shorten the data string.

8031 Cod49 wrong data

The data string contains wrong characters. The bar code is not printed.

→ Correct the content of the data string.

8850 Unknown filetype

Graphic files with the extension declared in the Easy Plug command #YG are not supported.

→ Transform the graphics file into another file format or use another graphic in a supported format. Check, if the spelling of the file extension is correct.

8851 Graphic open

The graphics file declared in the Easy Plug #YG command cannot be found on the compactflash card. Possible reasons are:

▣ Path and/or designation of the graphics file stored on the compactflash card doesn't match the path and/or designation declared by the #YG command.

▣ The file is not available on the compactflash card.

→ Check if the spelling of the graphics file is the same both in the #YG command and on the compactflash card.

8852 Graphic header

A graphics file declared by a Easy Plug #YG command should be proceeded. The file header doesn't match the file.

→ The graphics file is possibly faulty. Check the file and replace it if necessary.

8853 Graphic palette

A graphics file declared by a Easy Plug #YG command should be proceeded. Error reading the graphics palette.

→ The graphics file is possibly faulty. Check the file and replace it if necessary.

8854 Graphic read

A graphics file declared by a Easy Plug #YG command should be proceeded. Error reading the file.

→ The graphics file is possibly faulty. Check the file and replace it if necessary.

8856 Free store size

By setting parameter System > Memory > Free store size, a part of the memory is reserved, which the printer firmware can use if necessary (dynamic memory allocation). If this memory area is dimensioned too small, the printer firmware can not work and this error message shows up. One cause may for example be, that data are supposed to be loaded, whose size exceeds the reserved memory (e. g. graphics).

→ Enlarging the reserved memory partition, that is increasing the value of System > Memory > Free store size.

8857 Wrong mem config

Wrong memory configuration

Too much memory requested by parameters. The following parameters request more or less memory:

- System > Memory > Ram disk size
- System > Memory > Font downl. area
- System > Memory > Free store size
- The fault occurs, if the sum of requested memory space exceeds the amount of available memory.

After error confirmation, the relevant parameters are set back to their default values. Furthermore, a restart is triggered.

→ Change the settings of the relevant parameters.

8900 Codablock columns

Bar code Codablock: illegal number of columns.

→ Correct number of columns.

8901 Codablock rows

Bar code Codablock: illegal number of rows.

→ Correct number of rows.

8902 Codablock softw.

General software error, read chapter **General software errors** on page 162

8903 Codablock infogr

Bar code Codablock: info not in line.

→

8950 Logo open

Failure when attempting to read a logo, which has previously been copied on RAM disk or on memory card (thus using Easy Plug command #DK).

→ Repeat loading the logo via #DK command.

→ In cases of continuous occurrence of this error, please contact the technical support.

8951 File format

General software error, read chapter **General software errors** on page 162.

8952 Not installed

General software error, read chapter **General software errors** on page 162.

9000 Wrong errornum

General software error, read chapter **General software errors** on page 162.

9001 Software Error

General software error, read chapter **General software errors** on page 162.

9005 No print head

Print head could not be detected. Possible causes:

- Print head cable not connected
- Wrong print head type
- Defective print head cable
- Defective CPU board
- Print head cable plugged into wrong connector on the CPU board

→ Check print head cable, print head and CPU board and replace defective parts.

9007 Bad MAC Address

This error message is displayed, if an invalid MAC address is programmed to the CPU board. Valid means, the MAC address matches the range *00.0a.44.xx.xx.xx.*, which is reserved for NOVEXX Solutions.

In this case, the network will not be initialised. To enable work with the network, a valid MAC address must be programmed on the board. This can only be done by an authorized service technician or by the manufacturer.

→ Acknowledge the status message by pressing key 4. The printer will be starting, but cannot be used with a network.

→ Contact the technical support for a new programming of the board's MAC address.

→ If a new programming is not possible, exchange the CPU board.

9008 Powerfail signal

"Powerfail" is a signal at the power supply, which is normally activated for a short time, after the printer has been switched off. It triggers the storing of parameter settings and counter values, using the leftover of supply voltage.

The powerfail signal is already active after switching the printer on. The following causes are possible:

- Defektive power supply
- Defektive data cable
- Defektive board

→ Switch the printer off and on again. If the error occurs repeatedly:

→ Check the hardware (see above).

After acknowledging the message (pressing key 4), the printer works normal. But be aware that the powerfail signal is deactivated, what means, that no parameter settings and counter values are stored, when the printer is switched off.

9009 Temporary MAC

Temporary MAC address.

This error message is displayed, if the MAC address has the value *00.0a.44.00.00.00*. This MAC address is used only during production.

→ Acknowledge the status message by pressing key 4. The printer will be starting and the network can be used.

→ Contact the technical support for a new programming of the board's MAC address.

→ If a new programming is not possible, exchange the CPU board.

9011 Load firmware for x

At least one external device has no valid (e.g. an incomplete) application program loaded. This is the reason, why the device remains in the bootloading status and signalizes this status message. „x“ can be one of the following module names:

- Feed driver
- Peripheraldriver
- Intern. rewinder

→ Load a valid application program.

9013 Head voltage

Faulty 5 V print head supply voltage. Possible causes are:

- Print head was connected to the wrong connector on the CPU board.
- Short circuit, possibly is the print head defective.

→ Check if the print head is connected to the correct connector on the CPU board. Change the connector, if necessary.

→ Replace the print head

9014 Motor voltage

Faulty 45 V motor supply voltage. A possible cause is a short circuit, that is the print head is defective.

- Print head was connected to the wrong connector on the CPU board.
- Short circuit, possibly is the print head defective.

→ Check if the print head is connected to the correct connector on the CPU board. Change the connector, if necessary.

→ Replace the print head

9015 Network init.

Error during the network initialization.

→ Contact your network administrator.

9016 DHCP Failed

DHCP failed. This may happen, if parameter `Print interface > Network > IP Addressassign` is set to *DHCP*, but no IP-address can be drawn.

→ Contact your network administrator.

9017 RTC read failed

Error, while trying to read the realtime clock (RTC). Happens, if an Easy Plug command to read out the RTC is sent, but no RTC is built in.

→ Check, if the printer is supplied with a RTC. To do so, print a status printout (`Info > Status Printouts > Printer Status`).

You find the actual date on the printout, below the header „Systemversion“, if a RTC is installed.

→ Check, if the error occurs repeatedly or sometimes.

→ If it occurs repeatedly: Replace the CPU board.

If the error occurs sometimes, please refer to chapter **General software errors** on page 162.

9018 #!CA wrong Pos.

The #!CA command is placed at an inadmissible position – the Easy Plug interpreter can not proceed the command at this position (e. .g during the loading of files onto a memory card).

→ Call the #!CA command at an admissible position.

9022 No network link

This message can only occur, if the Ethernet address assign is set to DHCP. The cause is nearly always a badly connected network connector.

→ Check, if the network connector is plugged in properly.

9023 Filename: Functionname() Line: xxx

This status message indicates a software error. The error source is located in the source file “Filename” in function “Functionname()” in line xxx.

→ Switch device off and on again.

If the error occurs repeatedly:

→ Contact the manufacturer.

When doing so, it is important to be able to reproduce the error. Gather the following informations before calling the technical support of the manufacturer:

- Displayed information about the error source
- Label layout, logfiles, etc. as described in chapter **Unspecific errors** □ on page 162

9024 Not possible !

Detecting the material length (a function, which is normally used with MLI) is not possible, because a printjob is currently processed.

→ Retry as soon as the printjob is processed.

9030 Log file:CF full

An attempt to store data on the memory card was not successful, because of a full card.

→ Clear some storage space on the memory card, or

→ Insert an empty memory card.

9031 Log file: nnnn

File access error. nnnn = error code of the operating system.

→ Repeat the operation, which led to this message. If it comes to this message repeatedly, send a message to the Technical Support, including the error code.

9032 EP file log stop

Internal error during Easy Plug file logging (Tools > Diagnostic > EasyPl. file log).

→ Repeat operation. If the error occurs repeatedly: switch off the file logging.

Use parameter Tools > Diagnostic > EasyPl. file log only for error analysis purposes. Using the parameter in continuous operation can cause error messages, which are hard to understand.

9034 Use min 16MB RAM

The printer has not enough RAM. The applied firmware version needs at least 16 MB RAM for faultless operation.

→ Extend the printers RAM.

9035 No printpr. stop

This status message may appear during the loading of new firmware onto the H8 (64 Bit) or onto boards, which are connected to the H8 (e.g. Applikator Interface).

→ Switch the printer off and on again and retry the firmware loading.

9039 Ribbon mode chg.

The ribbon mode was changed between two consecutive printjobs via Easy Plug command (from thermal transfer to thermo or vice-versa).

→ Check the ribbon mode setting and, if necessary, change the setting (Print > Material > Foil mode).

9040 No Time Server

Comes up one times at startup, if Print interface > Network > Services > Time client is set to "On" and there is no response from the set time server.

→ Check the time server availability respectively the time server settings.

9100 Invalid format

Occurs during a download. The sent data is faulty, e. g. regarding an

- invalid data format
- invalid check sum
- invalid address

- invalid record type

→ Switch printer off and on again. Check the download data.

9101 Invalid Header

Occurs during a download. The sent files have a format error in the header.

→ Switch printer off and on again. Check the download data.

9102 Inv.Board Rev.

Occurs during a firmware download. The sent firmware does not match the version of the CPU board.

→ Switch printer off and on again. Check the download data.

9103 Inval. firmware

Occurs during a firmware download. The sent firmware does not match the installed CPU board.

→ Switch printer off and on again. Check the firmware file.

9104 Inv. Data Size

Occurs during a download. The size of the sent data doesn't match the file size indicated in the header.

→ Switch printer off and on again. Check the download data.

9107 Flash Overflow

Occurs during a download. The flash memory on the CPU board is full. No more data can be loaded.

→ Switch printer off and on again.

9108 Flash Ovf. Diag.

Occurs during a download. The flash memory on the CPU board has not enough free memory space left for diagnose data.

→ Delete data blocks in the flash memory or reduce max. size of the diagnose data.

9109 Flash Ovf. Params.

Occurs during a download. The flash memory on the CPU board has not enough free memory space left to store the current parameter settings.

After a restart, the parameters are set to "Factory setting".

→ Delete data blocks in the flash memory.

9110 Flash Write Err.

Occurs during a download. The flash memory can't be accessed for writing.

→ Switch printer off and on again.

9111 PIC Update Fail.

Occurs during a firmware update or a PIC-controlled device, if the update failed.

→ Switch printer off and on again.

9112 PIC missing

Occurs during a firmware update of a PIC-controlled device, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

9113 RFID Update Fail.

Occurs during a firmware update of a RFID module, if the update failed.

→ Switch printer off and on again.

9114 RFID missing

Occurs during a firmware update of a RFID module, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

9115 AWID missing

Occurs during a firmware update of an AWID RFID module, if a RFID module of another manufacturer was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

9116 Ser. Disp. Missing

Occurs during a firmware update of a serial operation panel, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

9117 Device Unknown

Occurs during a firmware update, if the device information in the header is missing.

→ Switch printer off and on again. Check the configuration.

9118 H8 Update Fail.

The update of a H8 device failed.

→ Switch printer off and on again.

9119 H8 missing

Occurs during a firmware update of a H8 device, if no such device was found.

→ Check the configuration.

The status message is cancelled automatically. The download continues.

9122 Checksum error

Checksum error while loading a firmware file. The checksum of the loaded data doesn't match the calculated checksum.

→ Repeat the download.

→ If the error continues to occur, the file is probably damaged or corrupted. Check/ exchange the firmware file.

9123 Memory unavailable

Error while loading a firmware file. There is not enough free memory available.

→ Restart machine and repeat the download.

→ If the error continues to occur: Reduce the memory which is assigned by the following parameters:

- System > Memory > Ram disk size
- System > Memory > Font downl. area

- System > Memory > Free store size

Cleaning & Maintenance

CLEANING INSTRUCTIONS

Safety

**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 device 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	Order No.
Printhead	Cleaning stylus	95327
	Cleaning paper	5030
Rubber rollers (print roller, pressure roller, etc.)	Roller cleaner	98925
Deviator rollers	Cleaning solvent, alcohol, isopropyl alcohol	--
	Label release spray	A103198
Housing	Standard commercial neutral cleaning agent	--

[Tab. 25] 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.

PRINT HEAD

Important Handling Notes

CAUTION!

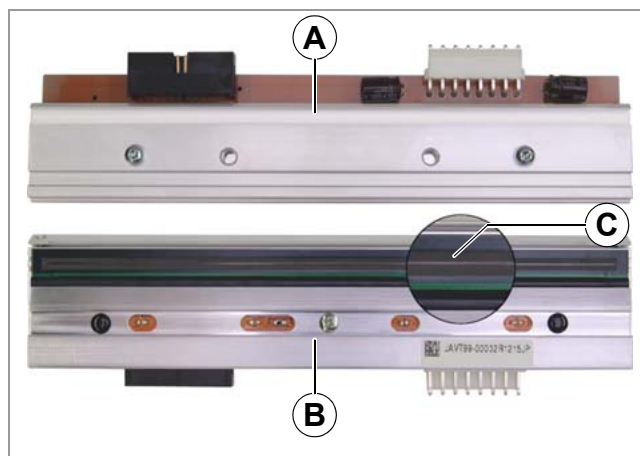
Print head can be damaged.

→ Protect the print head [89] from electrostatic discharges when performing maintenance work or cleaning.^a

→ Do not touch the thermal edge [89C].

→ Do not use sharp or hard objects to clean the print head.

- a) If you do not have any professional ESD protection equipment (ESD wristband, ESD shoes, ...): place one hand on an earthed object near to you (e.g. a radiator) before touching the device, to discharge any static charge your body may be carrying.



[89] Print head viewed at from the top (A) and bottom (B).

Finding out the print head resolution

By means of the resistance values given in the following table, it can be determined the resolution of the print head. The resolution value can be found on a label on the print head.

Resolution		Resistance
8.0 Dot/mm	203 dpi	560-760 Ohm
11.8 Dot/mm	300 dpi	960-1300 Ohm
23.6 Dot/mm	600 dpi	approx. 1700 Ohm

Cleaning the print head

**WARNING!**

Risk of burning injuries from a hot print head.

→ Ensure that the print head has cooled down before cleaning it.

Impurities such as lint and color particles from the thermotransfer foil may collect on the print head during printing. This can lead to a noticeable detrimental effect on the printed image, shown by:

- Differing contrast on the labels
- Light stripes in the printing direction

▮ Clean print head regularly to ensure optimal print head condition.

Cleaning intervals

- Thermal transfer printing: after each used up ribbon roll
- Direct thermal printing: after each used up label roll

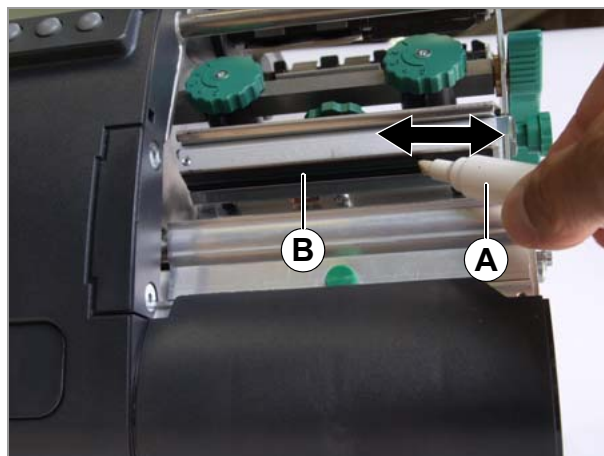
Preparation

1. Switch off the printer.
2. Open the print head pressure lever. The print head folds upwards.
3. Remove material and foil from the printer.

Cleaning with a cleaning pen

→ Applying light pressure, go over the thermal edge [2B] a few times with the cleaning pen [2A].


Cleaning pen: see chapter **Cleaning agents** □ on page 201.

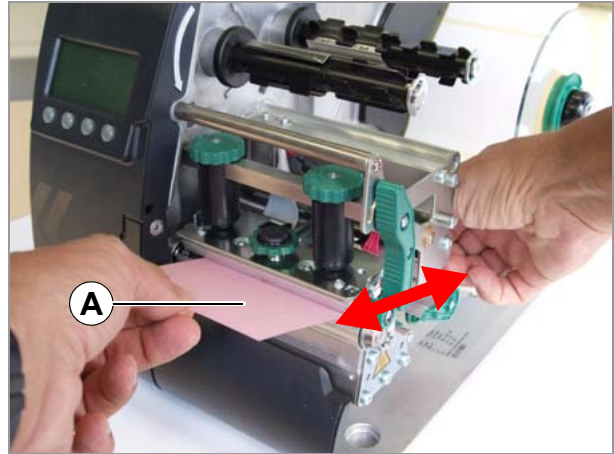


[90] Cleaning the thermal edge with a cleaning pen (A).

Cleaning with cleaning paper

1. Cut a strip of cleaning paper matching the print head width.
2. Insert the cleaning paper [91A] into the printer with the rough side facing upwards.
3. Close the pressure lever.
4. Move the cleaning paper back and forth repeatedly [91].

Cleaning paper: see chapter **Cleaning agents**  on page 201.



[91] Cleaning the thermal edge with cleaning paper (A).

Cleaning with alcohol**CAUTION!**

Risk of fire due to a flammable liquid.

→ Observe the safety instructions on the alcohol bottle.

→ Don't smoke.

■ Only use alcohol-based solvents ¹ when the other two cleaning agents are not available!

→ Moisten a lint-free cloth with alcohol; wipe the thermal edge with the cloth.

→ Allow print head to dry for several minutes.

1) For example ethyl or isopropyl alcohol.

Changing the print head



WARNING!

Risk of burning injuries from a hot print head.

→ Ensure that the print head has cooled down before cleaning it.

CAUTION!

Risk of damaging the print head and/or the power supply, if a wrong print head is installed.

→ Never install a 600 dpi print head into a 300 dpi or 203 dpi printer! ^a

- a) On the other hand may a 203 dpi or 300 dpi print head be operated in a 600 dpi printer without causing any damage.

CAUTION!

Risk, that the print head misaligns, what most probably downgrades the print quality considerably.

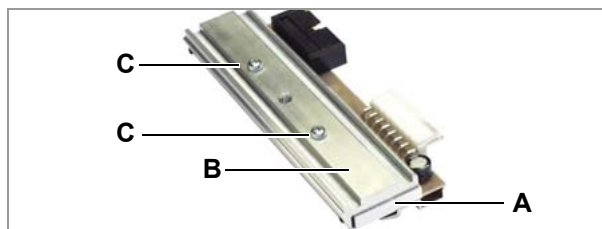
→ Never loosen the screws [92C] fixing the print head on the bracket.

Dismantling the print head:

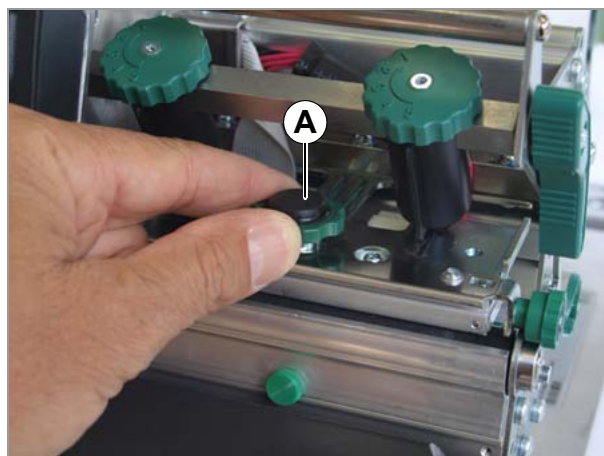
1. Switch off the printer and disconnect from the power.
2. Remove material and ribbon from the printer.
3. Open the pressure lever.
4. Press the print head onto the print roller. At the same time remove the knurled screw [93A].
The print head is released from the fastener and remains on the print roller [94].
5. Remove both print head cables [95A] from the print head.
6. Remove the print head.

Fitting the print head:

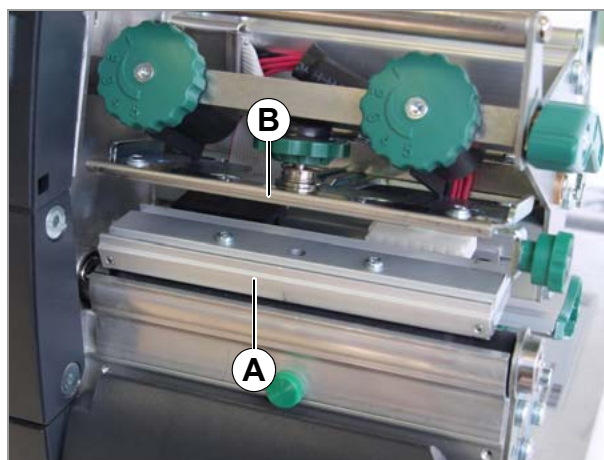
1. Note the resistance of the new print head. You can read this on a sticker directly on the print head!
2. Affix the print head cable.
3. Press the print head against the fastener from below and tighten the knurled screws.
⚠ Don't touch the thermal bar while doing so!
4. Switch on the printer.
5. Call up the parameter System > Hardware Setup > Head resistance and enter the print head resistance you noted earlier.



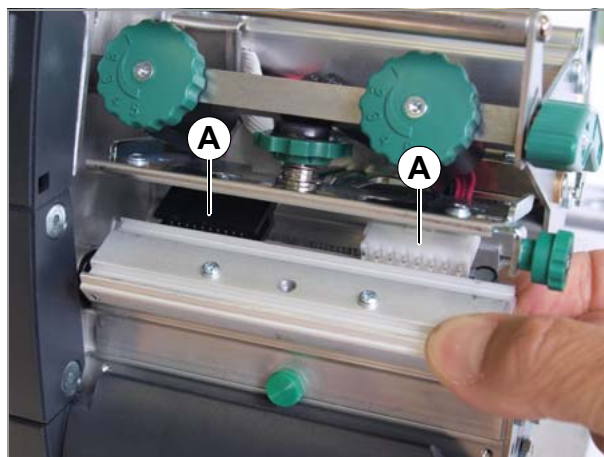
[92] Print head (A) and bracket (B) were adjusted exactly by means of special positioning tools.



[93] Turning out the knurled screw (A) .



[94] Print head (A) removed from the holder (B).



[95] Pulling off the print head cables (A).

PRINT ROLLER

Cleaning the Print Roller

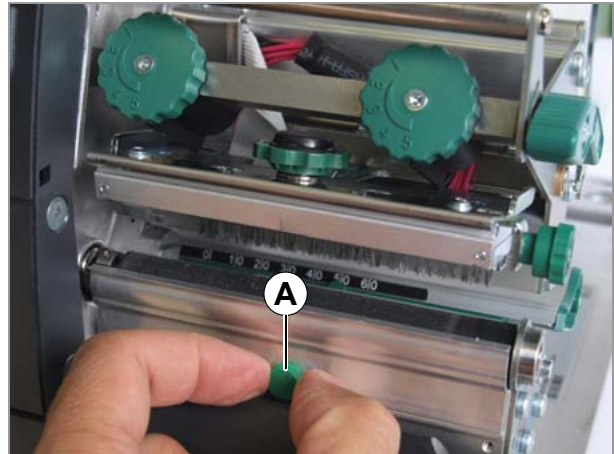
**WARNING!**

Risk of burning injuries from a hot print head.

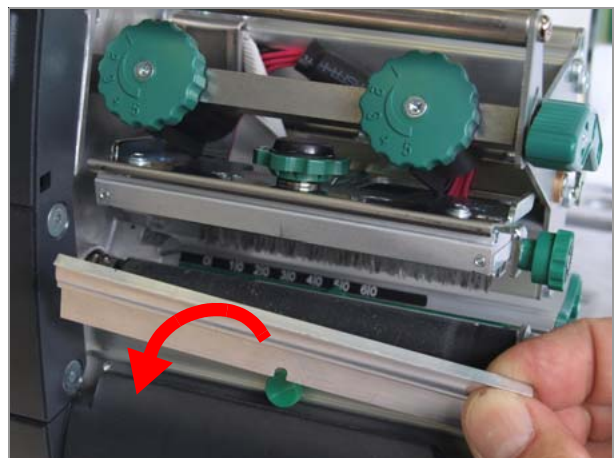
→ Ensure that the print head has cooled down before cleaning it.

Contamination on the print roller can degrade the quality of the print and the transport of the material.

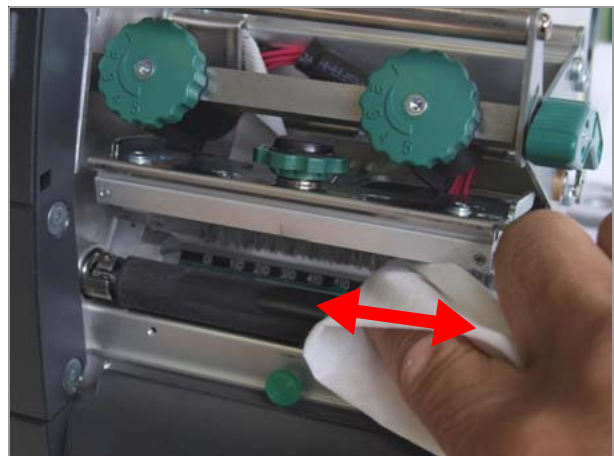
1. Switch off the printer and disconnect from the power
2. Remove material and foil from the printer.
3. Loosen the knurled screw [96B] in the middle of the tear-off edge.
4. Remove the tear-off edge [97].
5. Moisten a lint-free cloth with roller cleaner and wipe the printer roller [98]. Gradually rotate the roller until it is completely clean.
6. Refit the tear-off edge.



[96] Loosen the knurled screw (A).



[97] Remove the tear-off edge.



[98] Cleaning the print roller.

Changing the Print Roller

**WARNING!**

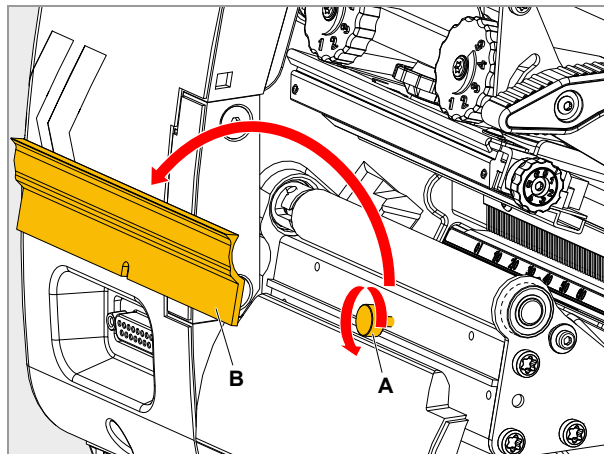
Risk of burning injuries from a hot print head.

→ Ensure that the print head has cooled down before cleaning it.

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

Disassembly:

1. Switch off the printer and disconnect from the power.
2. Open the print head pressure lever.
3. Remove material from the printer.
4. Unfasten the knurled screw [99A] in the middle of the tear-off edge [99B]. Remove the tear-off edge.

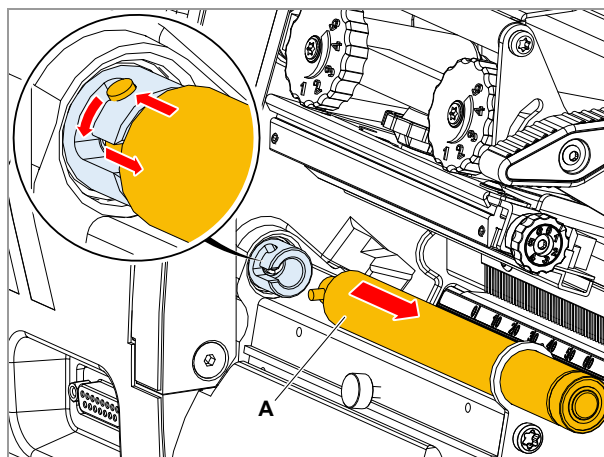


[99] Removing the tear-off edge.

5. Rotate the print roller [100] until the bayonet coupling is visible [100 detail].
6. Press the print roller firmly in up to the stop, then turn it to the left and pull it out [100A].

Fitting:

1. Push the print roller through the external bearing plate.
2. Turn the print roller so that the steel pin at its end engages in the opening of the bayonet coupling.
3. Push the print roller firmly in up to the stop, then turn it to the right up to the stop.



[100] Loosening of the bayonet coupling.

PUNCH SENSOR

During printing the punch sensor can become contaminated with lint. Large amounts of dirt can lead to problems with perforation recognition.

To free the punch sensor from dust and abraded particles:

1. Remove the cover [101A] gently and swivel downwards.
2. Remove the sensor arm [102A].
3. Clean the opening [102B] with compressed air.

CAUTION!

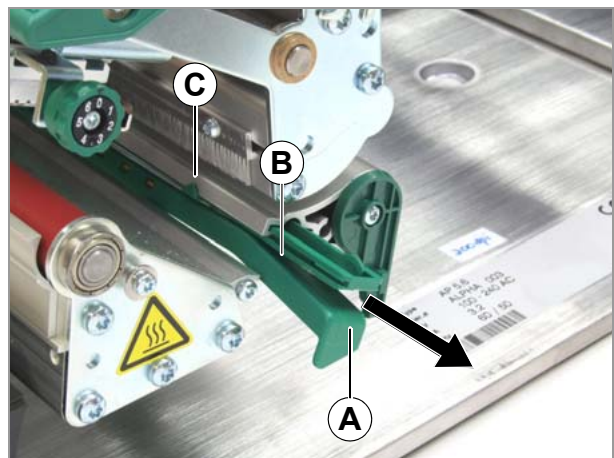
Label sensor can be damaged.

→ Do *not* use sharp or hard objects or solvents to clean the label sensors.

▮▮▮▮ The light transmission sensor is situated in the upper and the lower part of the sensor arm on a level with the indicator [102C]. The reflex sensor is situated about 5 mm further out in the lower part.



[101]Open the cover (A).



[102]Pull out the label sensor fork (A)..

MATERIAL GUIDING: SETTING THE MOVABILITY

Tools

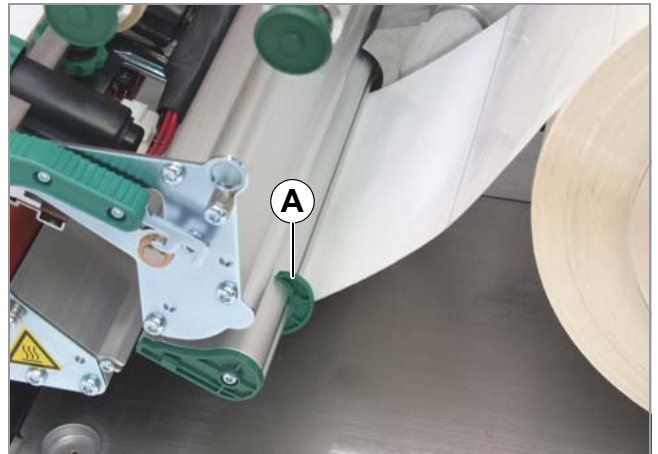
Torx screwdriver of size 10

If the material guiding [103A] shifts during the printing, the sliding friction has to be increased:

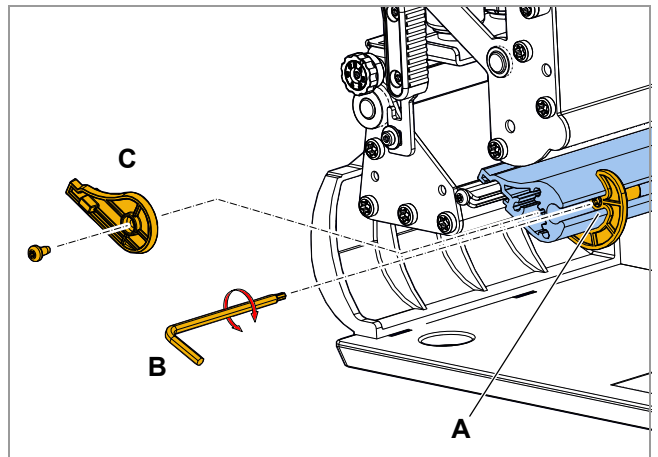
1. Unscrew the cover [104C].
2. Tighten the set screw [104A] in the material guide to increase the driving force.
3. Check the movability of the material guide. If necessary, repeat step 2.
4. Reassemble the cover.



Adjusting the friction according to the factory settings: see service manual.



[103] Adjusting the material guide (A).



[104] Tighten the set screw (A) to increase the driving force.

Disposal

SCRAPPING THE PRINTER

Before scrapping

**WARNING!**

The printer operates at mains voltage! Contacting electrically live components can cause potentially lethal electrical shocks and burns.

→ Before disposing of the printer, disconnect all cables.

Disposal measures



During the production of the individual components, the manufacturer ensures that as little an impact is made on the environment as possible. When it comes to disposal, you as the user have a considerable influence in helping to reduce the strain on the environment.

For details about the disposal of material (e. g. ribbon) please consult the respective manufacturer. Please heed the following notes regarding the disposal of packaging, defect components after maintenance or repair work, or even the disposal of the printer after the end of the product's service life:

→ Dispose of waste properly, i.e. sorted according to the material groups of the parts to be disposed of. The aim should always be to achieve a maximum possible reutilisation of the basic materials combined with the minimum possible environmental impact.

Therefore, pay attention to the following:

- First of all, remove problem materials from the device and dispose of them separately. Problem materials are e.g. batteries, LCD displays and parts containing mercury.
- Then separate the remaining parts as much as possible according to material for recycling.

→ Pay attention to the material and disposal instructions which may be included on certain individual parts.



→ Under no circumstances should you simply throw electrical or electronic scrap into the rubbish bin.

→ Use environmentally compatible alternatives such as returning waste to the suppliers or the manufacturer, disposal by specialised waste disposal firms, exchange services, etc.

→ Fundamentally dispose of waste in as environmentally compatible a manner as today's environmental protection, reprocessing and disposal systems allow.

→ Refer to your supplier, the appropriate disposal firms or directly to the manufacturer if you have any disposal problems. The manufacturer can provide you with information and help you to dispose of components from the printer range in a modern and environmentally compatible manner.

■ WEEE-Reg.-Nr. DE 46850411

EU Declaration of Conformity

(Translation of original version)

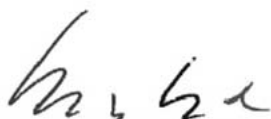
This declaration of conformity is issued under the sole responsibility of the manufacturer.

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:

Model	XLP 504 / XLP 506
General designation	Label Printer
Applicable EU directives	2014/30/EU (EMC) 2006/42/EG (Machinery) 2011/65/EU (RoHS)
Applied harmonized standards, especially	EN ISO 12100 : 2010 EN 60950-1:2006/A2:2013 EN 55032:2015 EN 61000-6-2:2005 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, 20.03.2018

Manfred Borbe (Director)

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