PANDUIT®

Instructions

DP4300M

Label Printer

DP4300M

Instructions
for the following products

Family	Type
DP	DP4300M
	DP4300M/E

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1.1 Instructions

Important information and instructions in this documentation are designated as follows:

Danger!
Draws attention to an exceptionally great, imminent danger to your health or life due to hazardous voltages.

Danger!
Draws attention to a danger with high risk which, if not avoided, may result in death or serious injury.

Warning!
Draws attention to a danger with medium risk which, if not avoided, may result in death or serious injury.

Caution!
Draws attention to a danger with low risk which, if not avoided, may result in minor or moderate injury.

Attention!
Draws attention to potential risks of property damage or loss of quality.

Note!
Advice on how to make work easier or an important step to be carried out.

Environment!
Gives you tips on protecting the environment.

▶ Handling instruction

▷ Reference to section, position, illustration number or document.

∗ Option (accessories, peripheral equipment, special fittings).

Time Information in the display.

1.2 Intended Use

- The device is manufactured in accordance with the current technology standards and the recognized safety rules. However, danger to the life and limb of the user or third parties and/or damage to the device and other tangible assets can arise during use.
- The device may only be used for its intended purpose and if it is in perfect working order, and it must be used with regard to safety and dangers as stated in the operating manual.
- The device is intended exclusively for printing suitable materials. Any other use or use going beyond this shall be regarded as improper use. The manufacturer/supplier shall not be liable for damage resulting from unauthorized use; the user shall bear the risk alone.
- Usage for the intended purpose also includes complying with the operating manual.

1.3   Safety Instructions

- The device is configured for voltages of 100 to 240 V AC. It only has to be plugged into a grounded socket.
- Only connect the device to other devices which have a protective low voltage.
- Switch off all affected devices (computer, printer, accessories) before connecting or disconnecting.
- The device may only be used in a dry environment, do not expose it to moisture (sprays of water, mists, etc.).
- Do not use the device in an explosive atmosphere.
- Do not use the device close to high-voltage power lines.
- If the device is operated with the cover open, ensure that people's clothing, hair, jewelry etc. do not come into contact with the exposed rotating parts.
- The device or parts of it can become hot while printing. Do not touch during operation, and allow to cool down before changing material and before disassembly.
- Risk of crushing when closing the cover. Touch the cover at the outside only. Do not reach into the swivel range of the cover.
- Perform only those actions described in this operating manual.
  Work going beyond this may only be performed by trained personnel or service technicians.
- Unauthorized interference with electronic modules or their software can cause malfunctions.
- Other unauthorized work on or modifications to the device can also endanger operational safety.
- Always have service work done in a qualified workshop, where the personnel have the technical knowledge and tools required to do the necessary work.
- Warning stickers must not be removed, as then you and other people cannot be aware of dangers and may be injured.
- The maximum sound pressure level is less than 70 dB(A).

> **Danger!**
> **Danger to life and limb from power supply.**
> ▶ **Do not open the device casing.**

> **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.**

1.4   Environment

Obsolete devices contain valuable recyclable materials that should be sent for recycling.

▶ Send to suitable collection points, separately from residual waste.

The modular construction of the printer enables it to be easily disassembled into its component parts.

▶ Send the parts for recycling.

The electronic circuit board of the device is equipped with a lithium battery.

▶ Take old batteries to collection boxes in shops or public waste disposal centers.
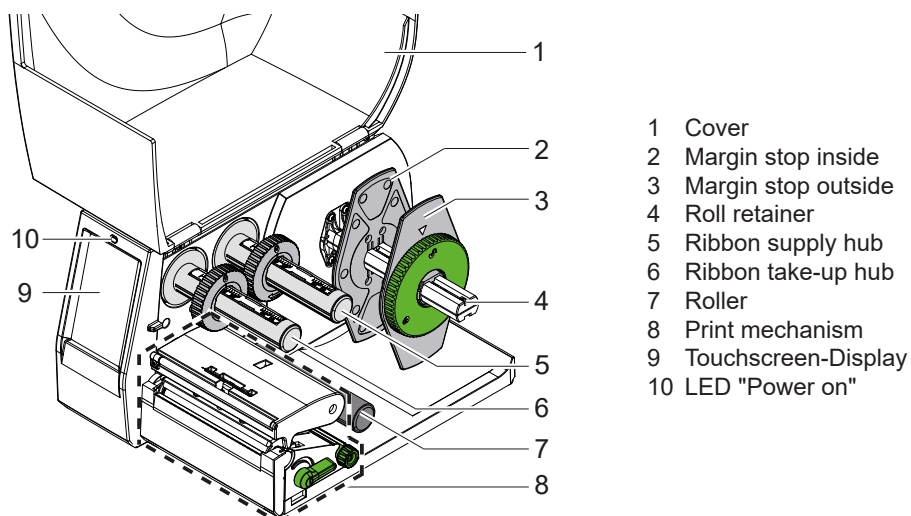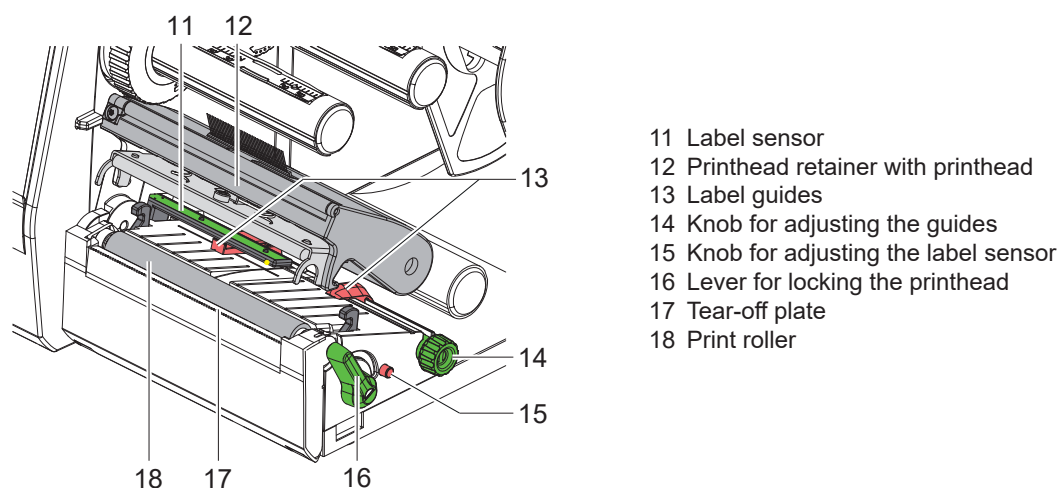
2.1 Device Overview
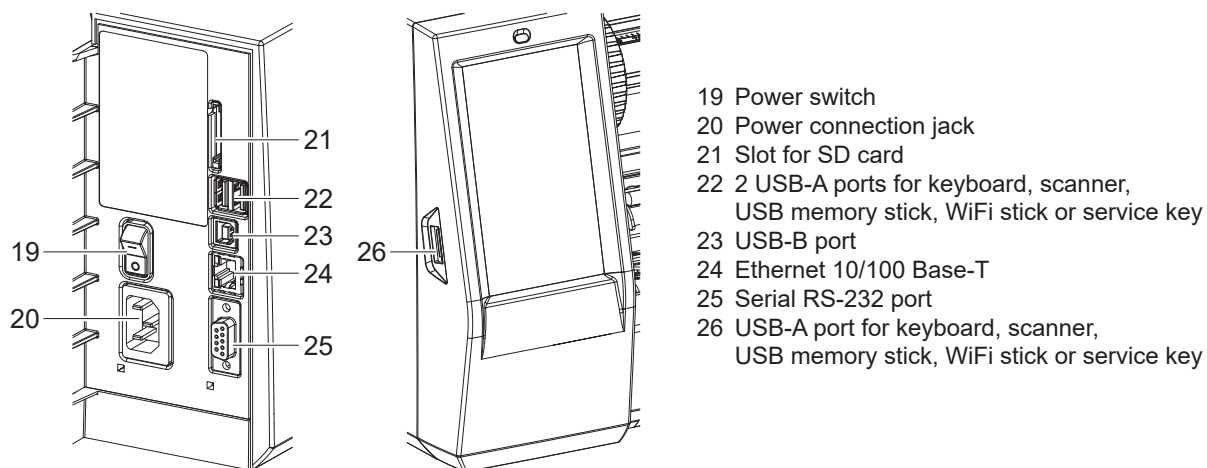

Figure 1 Overview

1 Cover
2 Margin stop inside
3 Margin stop outside
4 Roll retainer
5 Ribbon supply hub
6 Ribbon take-up hub
7 Roller
8 Print mechanism
9 Touchscreen-Display
10 LED "Power on"

Figure 2 Print unit

11 Label sensor
12 Printhead retainer with printhead
13 Label guides
14 Knob for adjusting the guides
15 Knob for adjusting the label sensor
16 Lever for locking the printhead
17 Tear-off plate
18 Print roller

Figure 3 Connections

19 Power switch
20 Power connection jack
21 Slot for SD card
22 2 USB-A ports for keyboard, scanner,
   USB memory stick, WiFi stick or service key
23 USB-B port
24 Ethernet 10/100 Base-T
25 Serial RS-232 port
26 USB-A port for keyboard, scanner,
   USB memory stick, WiFi stick or service key

2.2 Unpacking and Setting-up the Printer

▶ Lift the label printer out of the box.

▶ Check label printer for damage which may have occurred during transport.

▶ Set up printer on a level surface.

▶ Remove foam transportation safeguards near the printhead.

▶ Check delivery for completeness.

Contents of delivery:

- Printer
- USB Cord
- USB Flash Drive
- Quick start guide
- Warranty card
- Knife
- Roll of Panduit Hybrid Ribbon
- Spare Ribbon core

- Power supply Cord US (DP4300M)

- Power supply Cord Europe (DP4300M/E)
- Power supply Cord Swiss (DP4300M/E)
- Power supply Cord China (DP4300M/E)
- Power supply Cord Australia (DP4300M/E)
- Power supply Cord UK (DP4300M/E)

ℹ Note!
Please keep the original packaging in case the printer must be returned.

❗ Attention!
The device and printing materials will be damaged by moisture and wetness.
▶ Set up label printers only in dry locations protected from splash water.

2.3 Connecting the Device

The standard available interfaces and connectors are shown in Figure 3.

2.3.1 Connecting to the Power Supply

The printer is equipped with a wide area power unit. The device can be operated with a supply voltage of 230 V~/50 Hz or 115 V~/60 Hz without adjustment.

1. Check that the device is switched off.
2. Plug the power cable into the power connection jack (20/Figure 3).
3. Plug the power cable into a grounded socket.

2.3.2 Connecting to a Computer or Computer Network

❗ Attention!
Inadequate or no grounding can cause malfunctions during operations.
Ensure that all computers and cables connected to the label printer are grounded.

▶ Connect the label printer to a computer or network by a suitable cable.

For details of the configuration of the individual interfaces ▷ Configuration Manual.

2.4 Switching on the Device

When all connections have been made:

▶ Switch the printer on at the power switch (19/Figure 3).
The printer performs a system test, and then shows the system status *Ready* in the display.

3 Touchscreen-Display

The user can control the operation of the printer with the touchscreen display, for example:

- Issuing, interrupting, continuing and canceling print jobs,
- Setting printing parameters, e.g. heat level of the printhead, print speed, interface configuration, language and time of day (▷ Configuration Manual),
- Control stand-alone operation with a memory module (▷ Configuration Manual),
- Update the firmware (▷ Configuration Manual).

Many functions and settings can also be controlled by software applications or by direct programming with a computer using the printer's own commands. ▷ Programming Manual for details.

Settings made on the touchscreen display make the basic settings of the label printer.

> **Note!**
> **It is advantageous, whenever possible, to make adaptations to various print jobs in the software.**

3.1 Start Screen

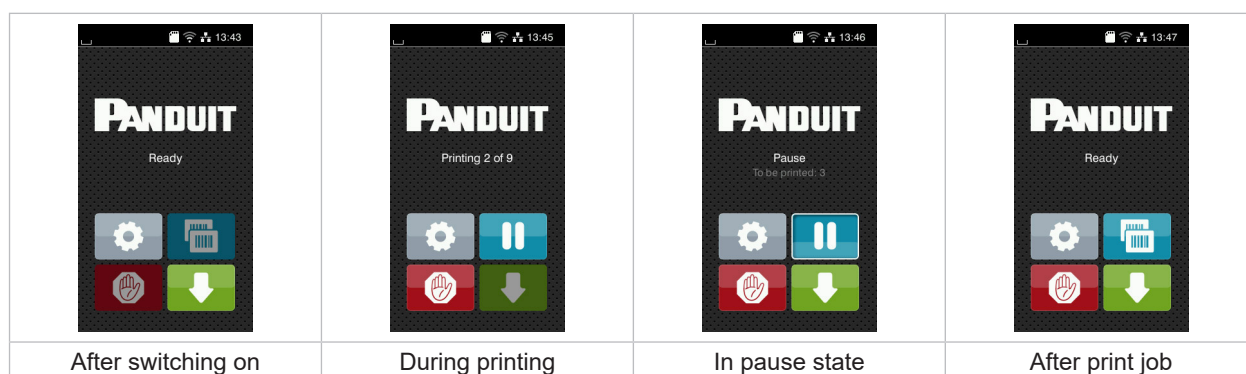| After switching on	During printing	In pause state	After print job

Figure 4   Start screen

The touchscreen display is operated directly by touch:

- To open a menu or select a menu item lightly touch the corresponding symbol.
- To scroll in lists slide finger up or down on the display.

⚙	Open the menu	▥	Repeat the last printed label
❚❚	Interrupt the print job	✋	Short touch: Cancel the current print job Long touch: Cancel all print jobs
❚❚	Continue the print job	⬇	Feed a blank label

Table 1   Symbols on the start screen

> **Note!**
> **Inactive symbols are shaded.**

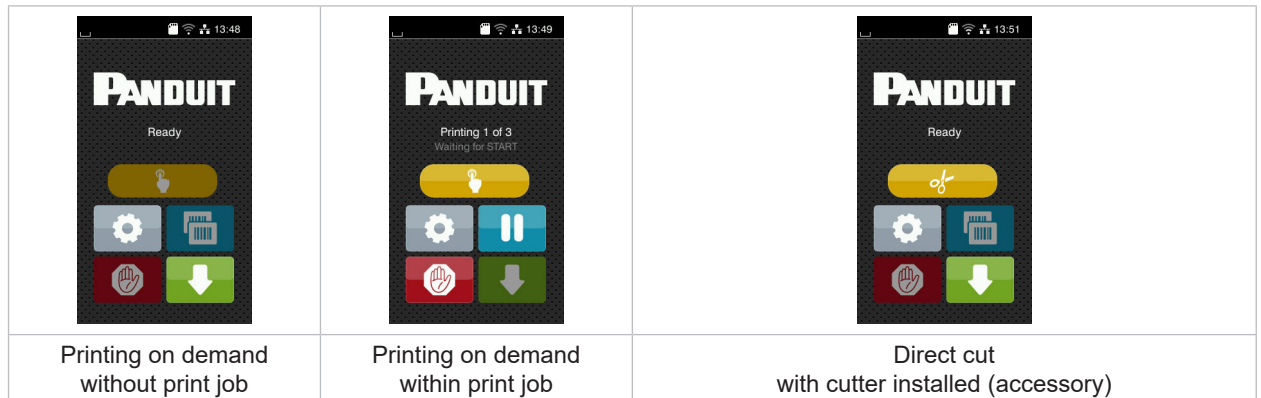With special software or hardware configurations additional symbols appear on the start screen:

Printing on demand without print job	Printing on demand within print job	Direct cut with cutter installed (accessory)

Figure 5   Optional symbols on the start screen

	Release printing of a single label within a print job including cutting...		Release a direct cut without media feed

Table 2   Optional symbols on the start screen

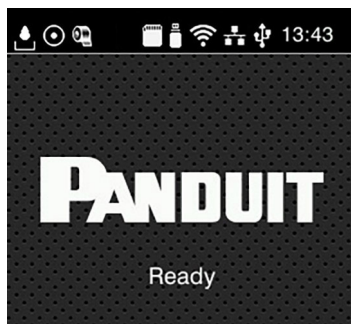In the headline several information are displayed as widgets depending on the configuration:

Figure 6   Widgets in the start screen

	Displays the current data transfer in the form of a falling drop.
	The *Save data stream* function is active ▷ Configuration manual All received data are stored in a .lbl file.
	Warning ribbon end ▷ Configuration manual The remaining diameter of the ribbon supply roll undershoots the set value.
	SD card installed
	USB memory installed
	WiFi connection active The WiFi strength is displayed by the number of white arcs.
	Ethernet connection active
	USB connection active
15:14	Clock time

Table 3   Widgets in the start screen

3.2 Navigation in the Menu

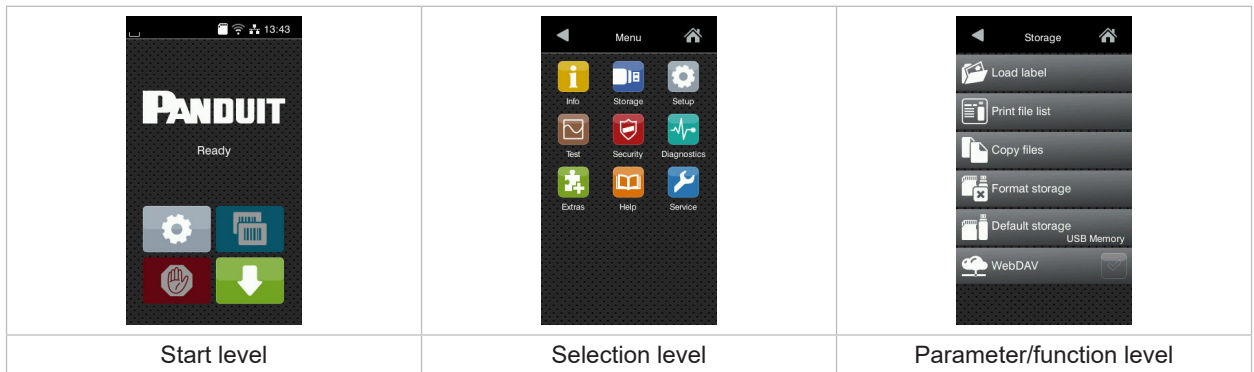|		
Start level	Selection level	Parameter/function level

Figure 7   Menu levels

▶ To open the menu select on the start screen.

▶ Select a theme in the selection level.
Several themes have substructures again with selection levels.
To return from the current level to the upper one select ◀. To leave the menu select 🏠.

▶ Continue the selection until the parameter/function level is reached.

▶ Start a function. The function may only start after a preparatory dialog.
- or -
Select a parameter to set. The setup possibilities are depending from the parameter type.

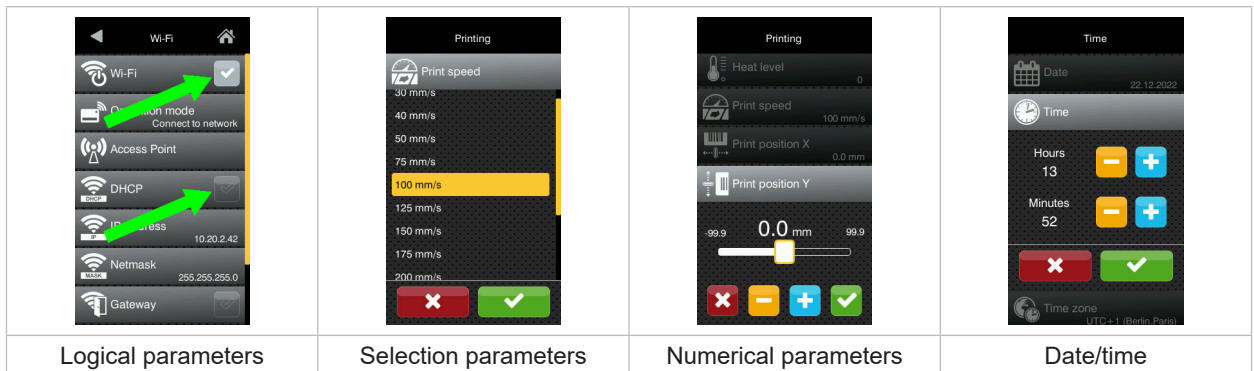|			
Logical parameters	Selection parameters	Numerical parameters	Date/time

Figure 8   Samples for parameter setting

	Scroll bar for rough value setting
	Decreasing the value step-by-step
	Increasing the value step-by-step
	Return without saving the setting
	Return with saving the setting
	Parameter is disabled, touching enables the parameter
	Parameter is enabled, touching disables the parameter

Table 4   Buttons for parameter setting
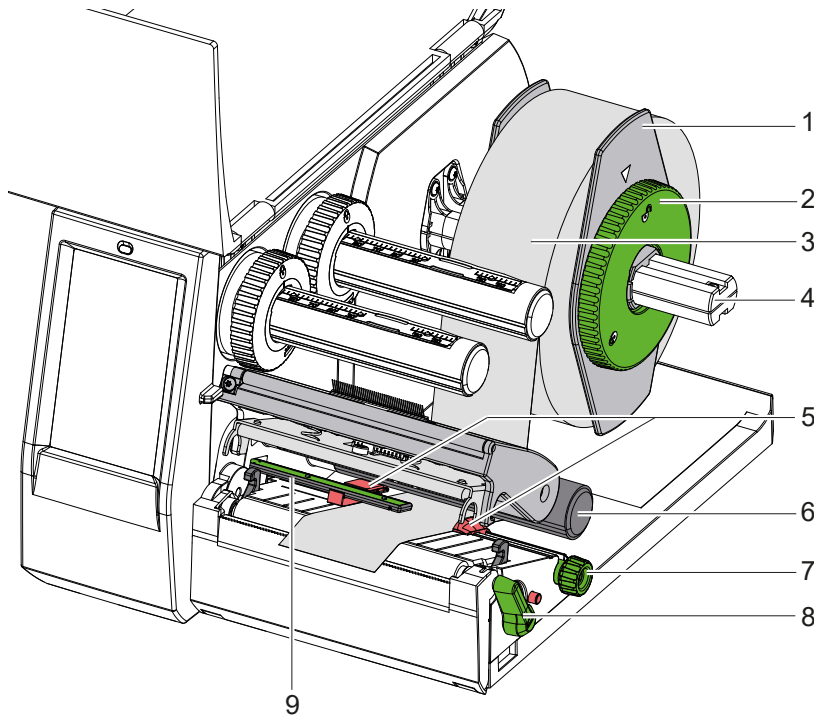
4.1 Loading Media from Roll

Figure 9   Loading media from roll

1. Turn ring (2) at the margin stop (1) counterclockwise, so that the arrow points to the symbol 🔓.
2. Remove the margin stop (1) from the roll retainer (4).
3. Load label roll (3) on the roll retainer (4) in such a way that the labels can be inserted into the printhead in the right position. The printing side of the labels must be visible from above.
4. Re-mount the margin stop (1) onto the roll retainer (4). Push the margin stop (1) to the roll (3) until the roll touches both margin stops and a clear resistance is encountered.
5. Turn ring (2) clockwise, so that the arrow (10) points to the symbol 🔒.
6. Turn lever (8) counterclockwise to open printhead.
7. Position guides (5) by turning the knob (7) so that they are several millimeters wider than the material.
8. Position material below the roller (6) and guide it through the print unit.

!	**Attention!**
	▶ **Guide material through the print unit below the label sensor (9).**

9. Move guides (5) closely to the edges of the material without clamping the material.
10. Adjust label sensor (▷ 4.2 on page 12).
11. Press printhead retainer down and turn lever (8) clockwise to lock the printhead.

4.2 Adjusting the Label Sensor

ℹ **Note!**
When the printer is delivered the label sensor is positioned in the middle of the paper feed. Thus, the label sensor must only be adjusted if materials with the following characteristics are used:

- **Material with reflex or cut-out marks, which are not in the middle.**
- **Multi-strip material with an even number of strips.**
- **Material with irregularly shaped labels.**

Figure 10   Adjusting the label sensor
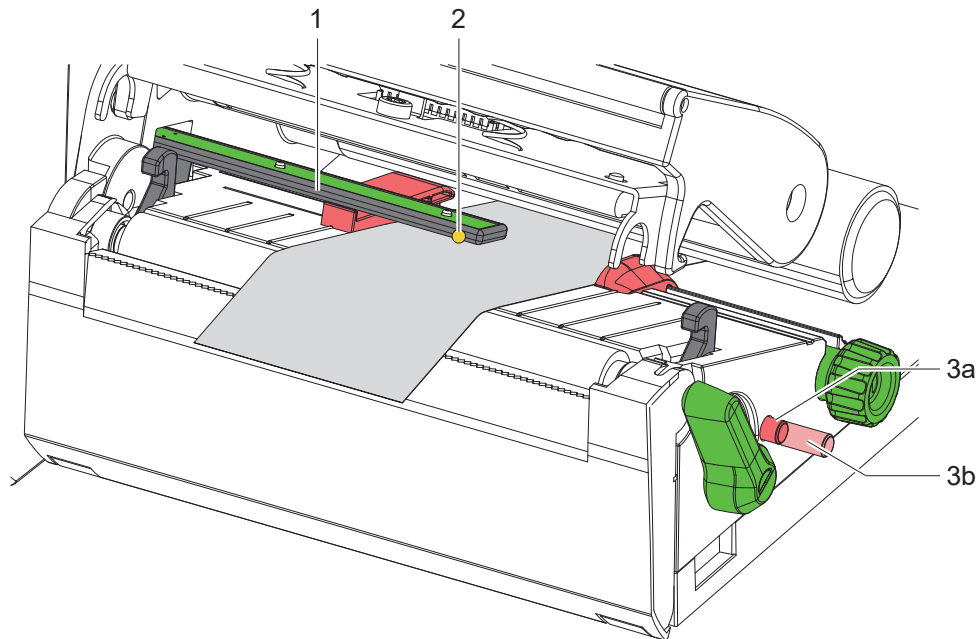
The sensor position (2) is marked with a yellow LED in the sensor retainer.

1. Open the printhead.
2. Press knob (3a) so that it moves into position (3b).
3. Position the sensor holder (1) by turning the knob (3) so that the sensor (2) can detect the front edge of the label in the direction of paper flow or the reflex or cut-out mark.
4. Press knob (3a) so that it moves into position (3b).

4.3   Loading Transfer Ribbon

i   **Note!**
With direct thermal printing, do not load a transfer ribbon; if one has already been loaded, remove it.
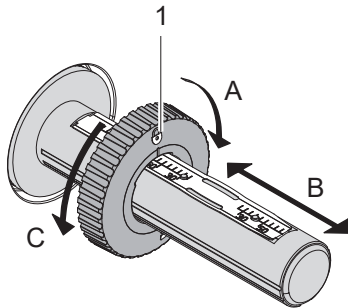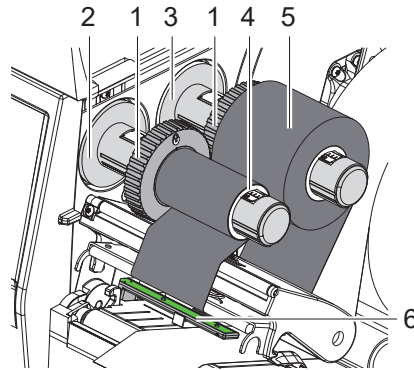

Figure 11   Guide Adjustment   Figure 12   Loading Transfer Ribbon

1. Clean the printhead before loading the transfer ribbon ($\triangleright$ 6.2 on page 16).
2. Open the printhead.
3. Set guide (1) on the ribbon supply hub to the correct transfer ribbon width (Figure 11):
•   Hold the hub and unlock the guide (1) by turning it in direction A.
•   Slide the guide in direction B and adjust the guide to the ribbon width using the scale.
•   Hold the hub and lock the guide by turning it in direction C.
4. Slide transfer ribbon roll (5) onto the ribbon supply hub (3) until it reaches the guide (1) so that the color coating of the ribbon faces downward when being unwound.

i   **Note!**
To rewind the ribbon a ribbon core (4) is needed that must be at least equal in width to the supply ribbon.
▶   **When changing the transfer ribbon use the empty supply ribbon core for winding the next ribbon.**
5. Adjust the position of the guide on the take-up hub to the width of the ribbon core (4) and push ribbon core on the take-up hub (2).
6. Guide the ribbon though the printing unit as shown in Figure 13.

!   **Attention!**
▶   **Guide transfer ribbon over the label sensor (6).**

7. Secure starting end of ribbon to the transfer ribbon core (4) with adhesive tape. Regard counterclockwise rotation direction of the ribbon take-up hub here.
8. Turn ribbon take-up hub (2) counterclockwise to smooth out the feed path of the ribbon.
9. Close the printhead.
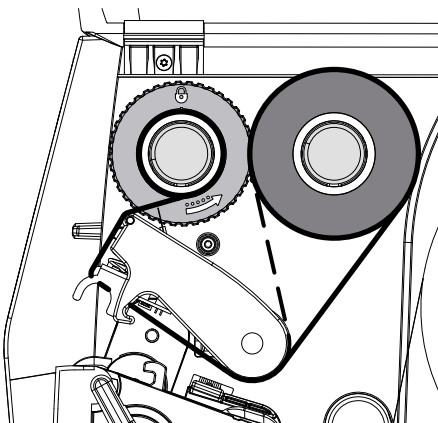
Figure 13   Transfer Ribbon Feed Path

4.4 Setting the Feed Path of the Transfer Ribbon

Ribbon wrinkling can lead to print image errors. The ribbon deflection (2) can be adjusted so as to prevent wrinkles.

Figure 14 Setting the feed path of the ribbon

ⓘ **Note!**
The adjustment is best carried out during printing.

▶ Turn screw (1) with torx wrench TX10 and observe the behavior of the ribbon.
• By turning it clockwise the outer edge of the transfer ribbon is tightened.
• By turning it counterclockwise the inner edge of the transfer ribbon is tightened.

> **!** **Attention!**
> **Printhead damage caused by improper handling!**
> ▶ **Do not touch the underside of the printhead with fingers or sharp objects.**
> ▶ **Ensure that the labels are clean.**
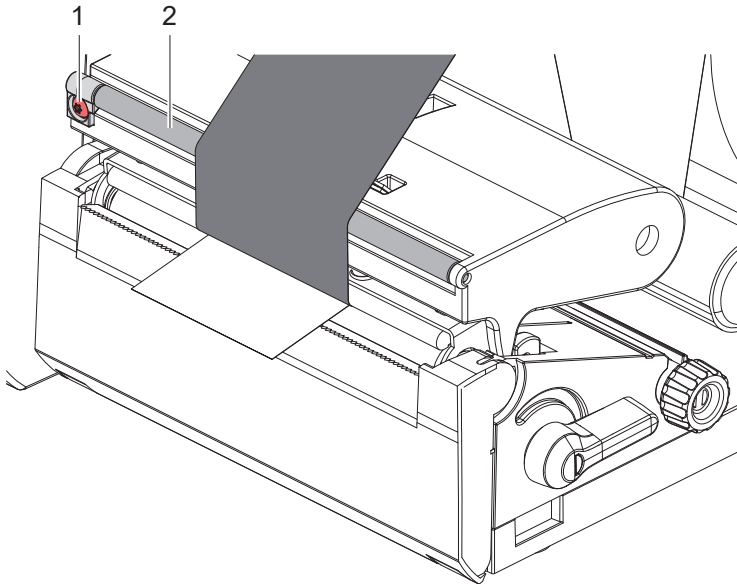> ▶ **Ensure that the label surfaces are smooth. Rough labels may reduce the service life of the printhead.**
> ▶ **Print with the lowest possible printhead temperature.**

The printer is ready for operation when all connections have been made and labels and transfer ribbon have been loaded.

5.1 Tearing-off

After printing the label is torn-off manually. For this the printer is equipped with a tear-off plate.

5.2 Cutting and Perforating

✳ Both full cutters and perforation cutters are available as accessories for DP4300M. With a cutter installed labels and continuous material can be cut-off or perforated automatically after printing.

The cutters have separate instructions for detailed information.

6.1 Cleaning Information

⚡ **Danger!**
Risk of death via electric shock!
▶ **Disconnect the printer from the power supply before performing any maintenance work.**

❗ **Attention!**
The printer can be damaged by aggressive cleansers.
Do not use abrasive cleaners or solvents for cleaning the external surfaces or modules.

Recommended cleaning kit PTR-CLN.

6.2 Cleaning the Printhead

Cleaning interval: every ribbon roll change

Substances may accumulate on the printhead during printing and adversely affect printing, e.g. differences in contrast or vertical stripes.

❗ **Attention!**
Printhead can be damaged!
Do not use sharp or hard objects to clean the printhead.
Do not touch protective glass layer of the printhead.

⚠ **Caution!**
Risk of injury from the hot printhead.
▶ **Ensure that the printhead has cooled down before starting cleaning.**
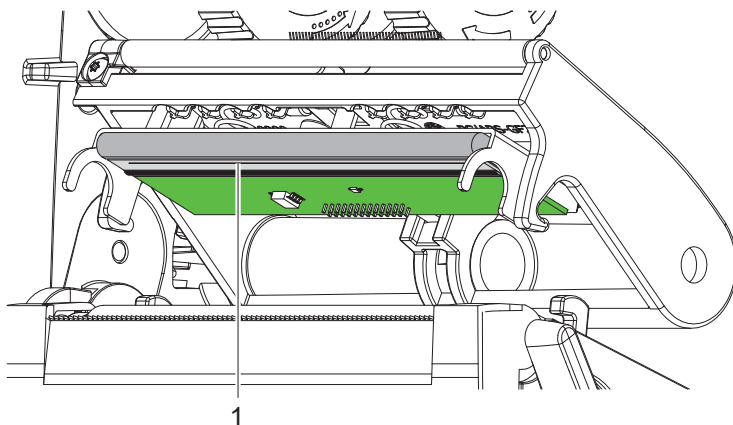

Figure 15   Heating line of the printhead

▶ Open the printhead.
▶ Remove material and transfer ribbon from the printer.
▶ Clean printhead surfaces with any component from Panduit cleaning kit (PTR-CLN).
▶ Allow printhead to dry for 2–3 minutes before resuming printing.

7.1   Error Display

The appearance of an error will be shown on the display:

Figure 16   Error display

The error treatment is pending on the error type ▷ 7.2 on page 17.

The display offers the following possibilities to continue after an error occurred:

Repeat	The print job will be continued after clearing the error cause.
Cancel	The print job will be cancelled.
Feed	The paper feed will be synchronized. Following the print job can be continued.
Ignore	The error message will be ignored. The print job will be continued possibly with limited performance.
Save log	The error does not allow print operation. For detailed analysis several system files can be saved on an external memory.

Table 5   Button in the error display

7.2   Error Messages and Fault Correction

Error message	Cause	Remedy
Barcode error	Invalid barcode content, e.g. alphanumeric characters in a numerical barcode	Correct the barcode content.
Barcode too big	The barcode is too big for the allocated area of the label	Reduce the size of the barcode or move it.
Buffer overflow	The input buffer memory is full and the computer is still transmitting data.	Use data transmission via protocol (preferably RTS/CTS).
Cutter blocked	Cutter cannot return into its home position and stays in an undefined position	Switch off the printer. Remove material. Switch on the printer. Restart print job. Change material
	No cutter function	Switch the printer off and then on. If error recurs call service.
Cutter jammed	The cutter is unable to cut the labels but is able to return into its home position	Press *Cancel* Change material.
Device not conn.	Programming addresses a non-existent device	Either connect this device or correct the programming.
File not found	Requested file is not on the card	Check the contents of the card.
Font not found	Error with the selected download font	Cancel current print job, change font.
Memory overflow	Current print job contains too much information, e.g. selected font, large graphics	Cancel current print job. Reduce amount of data to be printed.
Name exists	Duplicate usage of field name in the direct programming	Correct programming

Error message	Cause	Remedy
No label found	There are labels missing on the label material	Press *Repeat* repeatedly until printer recognizes the next label on the material.
	The label format as set in the software does not correspond with the real label format	Cancel current print job. Change the label format set in the software. Restart print job.
	Printer is loaded with continuous material, but the software is set on labels	Cancel current print job. Change the label format set in the software. Restart the print job.
No label size	The size of the label is not defined in the programming.	Check programming.
Out of paper	Out of label roll	Load labels.
	Error in the paper feed	Check paper feed.
Out of ribbon	Out of transfer ribbon	Insert new transfer ribbon.
	Transfer ribbon melted during printing	Cancel current print job. Change the heat level via software. Clean the printhead ▷ 6.2 on page 16 Load transfer ribbon. Restart print job.
Printhead open	Printhead not locked	Lock printhead.
Printhead too hot	Printhead is overheated	After pausing, the print job will be continued automatically. If the fault recurs repeatedly, reduce the heat level via software.
Read error	Read error when reading from the memory card	Check data of the card. Backup data, reformat card.
Remove ribbon	Transfer ribbon is loaded although the printer is set to direct thermal printing	for direct thermal printing remove ribbon
		for thermal transfer printing set the printer in the configuration or in the software to transfer printing
Syntax error	Printer has received an unknown or invalid command from the computer.	Press *Ignore* to skip the command or press *Cancel* to cancel the print job.
Unknown card	Card not formatted, Type of card not supported	Format card, use different type of card.
Voltage error	Hardware error	Switch the printer off and then on. If error recurs call service. It is shown which voltage has failed. Please note.
Write error	Hardware error	Repeat the write process, reformat card.

Table 6   Error Messages and Fault Correction

7.3   Problem Solution

Problem	Cause	Remedy
Transfer ribbon creases	Transfer ribbon deflection not adjusted	Adjust the transfer ribbon deflection. ▷ 4.4 on page 14
	Transfer ribbon too wide	Use a transfer ribbon slightly wider than the width of label.
Print image has smears or voids	Printhead is dirty	Clean the printhead. ▷ 6.2 on page 16
	Temperature too high	Decrease temperature via software.
	Unsuitable combination of labels and transfer ribbon	Use different type of ribbon.
Printer does not stop after transfer ribbon runs out	Thermal printing is chosen in the software	Change to thermal transfer printing.
Printer prints a sequence of characters instead of the label format	Printer is in *ASCII dump mode*	Cancel the *ASCII dump mode*.
Printer transports label media, but transfer ribbon does not move	Transfer ribbon incorrectly inserted.	Check and, if necessary, correct the transfer ribbon web and the orientation of the label side.
	Unsuitable combination of labels and transfer ribbon	Use different type of ribbon.
Printer only prints each second label	Setting of the size in the software is too large.	Change the size in the software.
Vertical white lines in the print image	Printhead is dirty	Clean the printhead. ▷ 6.2 on page 16
	Printhead is defective (failure of heat elements)	Change the printhead. ▷ Service Manual.
Horizontal white lines in the print image	Printer is used with the *backfeed > smart* in the cut or peel-off mode	Set the *backfeed > always* in the setup. ▷ Configuration Manual.
Print image is irregular, one side is lighter	Printhead is dirty	Clean the printhead. ▷ 6.2 on page 16

Table 7   Problem solution

Reference to the EU Declaration of Conformity and other approvals:

https://www.panduit.com/DP4300M

FCC

NOTE : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user may be required to correct the interference at his own expense.

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