

Assembly Instructions



Labeling Head

IXOR

Family	Type
Labeling Head IXOR	124L
	186L
	248L
	310L
	124R
	186R
	248R
	310R

Edition:07/2019 - Part No. 9009979

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Editor

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1	Introduction	4
1.1	Instructions	4
1.2	Intended Use	4
1.3	Safety Instructions	4
1.4	General Operation	5
1.5	Safety Markings	5
1.6	Environment	5
2	Technical Data	6
3	Component Overview	8
3.1	Components	8
3.1.1	Labeling Head Basic Unit	9
3.1.2	Unwinder	9
3.1.3	Rewinder	10
3.1.4	Peel Module	10
4	Operation	11
4.1	Safety during Operation	11
4.2	Deposit Material	11
4.3	Setting up the Label Sensor	13
4.4	Switch on the Device	13
4.5	Operating panel	13
4.6	Test and Synchronization without external starting signal	14
4.7	Speed	14
4.8	Start delay	14
4.9	Stop delay	14
5	Cleaning	15
6	Operational Notifications/Error Messages	16
6.1	Information	16
6.2	Warning	16
6.3	Error	16
7	Licenses	17
7.1	Declaration of Incorporation	17
7.2	EU Declaration of Conformity	18

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 danger with high risk which, if not avoided, may result in death or serious injury.



Warning!

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



Caution!

Draws attention to 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 to make work routine easier or on important steps 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 technological status 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 using suitable materials that have been approved by the manufacturer. 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, including the manufacturer's maintenance recommendations and specifications.



Note!

The complete documentation is included in the scope of delivery on DVD, and can also currently be found in the Internet.

1.3 Safety Instructions



Attention!

Initiation, adjustments and changing of parts are to be performed by qualified service personnel only.



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.

- The operator of the product has to ensure that the user of has read and understood the initial setup and assembly parts of the assembly instructions.

- The operator of the unit is obligated to adhere to the safety instructions and norms.
- Only execute the activities described in this assembly instructions.
- Subsequent work may only be performed by qualified personnel or service technician.
- Inappropriate tampering or changes of the device endanger the operational safety.
- Maintenance and repairs may only be performed by the manufacturer or qualified personnel.
- The operational and maintenance instructions must be adhered to.
- It must be insured that general upkeep is performed only by authorized personnel.

1.4 General Operation

- The device should only be used if locally secured and indoors.
- Due to high mechanical strain through the rapid movement of large weights the device and all of its components must be securely mounted on a stable mounting.



Attention!

Mounting the device with the display facing downward is not permitted to avoid materials from falling down.



Warning!

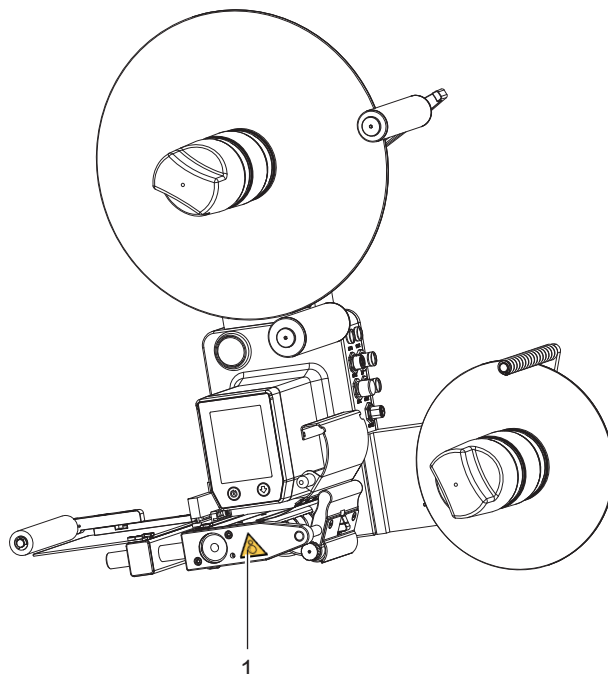
Rotating parts! Be aware that clothes, hair, jewellery or the like does not come in contact with the rotating parts.



Caution!

Danger of being cut by fast moving paper. Do not reach into the area where the paper is being guided while the device is active!

1.5 Safety Markings



1:



Danger of injury of rotating parts.



Attention!

Never remove or cover safety markings! Replace it in case of damage!

Figure 1 Safety Markings

1.6 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 applicator enables it to be easily disassembled into its component parts.

- Send the parts for recycling.

Labeling head			Structural width		124 mm		186 mm		248 mm		310 mm		
Performance													
Web speed			up to m/min		25, 50, 100, 200 - depending from device model								
			up to ipm		1,000, 2,000, 4,000, 8,000 - depending from device model								
Material													
Labels on roll			Paper, plastics PET, PE, PP, PVC										
Thickness			mm		0.055 - 1								
Weight			g/m ²		60 - 700								
Width	Labels ¹⁾	up to mm	120		182		244		306				
	Liner tape	up to mm	124		186		248		310				
Label length			mm		5 - 6,000								
Media roll	Outside diameter		310/410 mm (12"/16")									410 mm (16")	
	Core diameter		76 mm (3")										
	Winding		outside or inside										
Weight			up to kg		15								
Labeling head sizes and weights													
Height	with media roll 310 mm	min. mm	600 x 600					-					
x Width	with media roll 410 mm	min. mm	700 x 680					825 x 925					
Depth			mm		266		328		390		452		
Weight			min. kg		14		14.5		15		32		
Device data													
Drive			AC servo motor										
Operation panel			QVGA-resoluted LCD color display										
Masterencoder (option)			24 V HTL, track A + B										
Orientation of assembly			vertical / horizontal										
Label sensor													
Method			Transmitted light, inductive, capacitive ²⁾ , ultrasonic ²⁾										
Function			Detection of label margins and end of materials										
Interfaces													
Digital I/O			17 pin, 24 V PNP to communicate signals with a superior control unit (galvanically isolated)										
Analog			Inputs (0-10 V / 0-24 V) for speed, START , STOP parameters in conjunction with PLC supplied by the customer or potentiometer (galvanically isolated)										
LAN			MQTT, Modbus, Ethernet/IP ²⁾ , OPC UA ²⁾										
WLAN			WLAN 802.11 b/g/n, 150 MBit/s, 2.4 GHz										
Periphery (APPLY)			12 pin, to connect USB warning light and applicator (24 V PNP, galvanically isolated)										
End of web sensor			5 pin, 24 V PNP or end of web sensor by cab										
Start and stop sensor			5 pin each, 24 V PNP (galvanically isolated)										
Synchronized product speed			5 pin, 24 V PNP external synchronization signal or by masterencoder (galvanically isolated), masterencoder is an option										
Serial (option)			RS232/RS485										
Operating data													
Mains I Protection class			primarily TN and TT grids I Protection class I										
Power supply I Power consumption			100 - 240 VAC, 50 - 60 Hz I 100 V - 240 VAC / up to 4 A										
External fusing			120 V: at least 6 A slow, up to 20 A / 230 V: at least 3 A slow, up to 16 A										
Leakage current			EN 60950: 260 V / 60 Hz: 2.6 mA										
Type of protection			IEC 60529: IP 66, UL 50 type 12, NEMA 250 type 12										
Temperature / humidity	Operation		0 - 40 °C / 10 - 85 % not condensing										
	Stock		0 - 60 °C / 20 - 80 % not condensing										
	Transport		-25 - 60 °C / 20 - 80 % not condensing										
Approvals			CE, FCC, IC, ICES-3, CB, cULus										
Operation panel													
LED buttons			ON, FEED										
LCD graphics display			Width x Height mm		54 x 70								
Settings			Language settings, device settings, interfaces, memory for 100 product formats										
On display			Operational and warning messages										
Monitoring / test routines													
Label web			Pre-warning to end of label web, end of label web, label web broken										
Drive			Torque, temperature, power supplies, currents										
Electrical outputs			Overload protection, short circuit, reverse polarity										
System			Diagnostics when device is switched on, I/O test menu integrated										

¹⁾ The label size is further defined by the type of applicator. Limitations may apply to small labels, thin materials or strong adhesive.
Such applications need to be tested.

²⁾ on request

Table 1 Technical Data

Label output (max.) in permanent operation depend of speed and label length

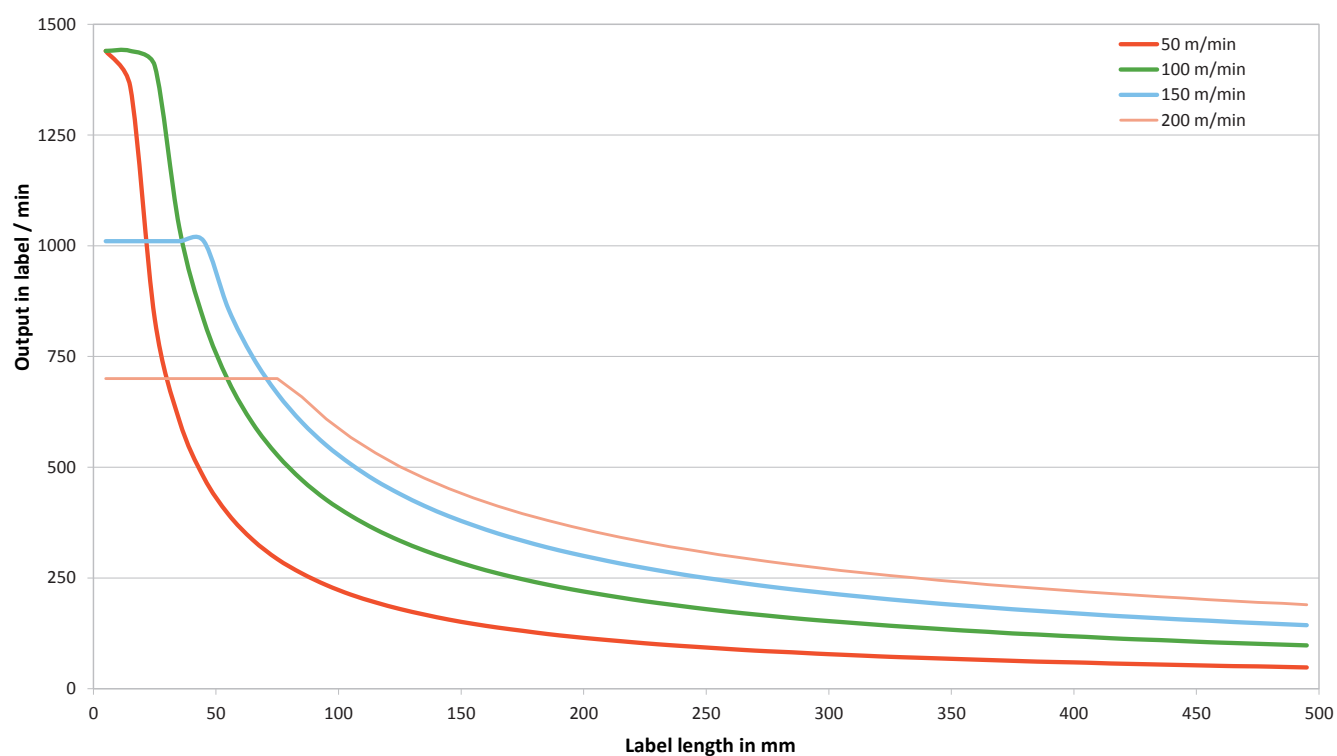


Figure 2 Label output

A higher label throughput is possible in an intermittent operation mode.

then:

operation time $T_{on} = \text{max. } 30 \text{ min}$

length of deactivation $T_{on} : T_{off} \text{ is } 1 : 1$

3.1 Components

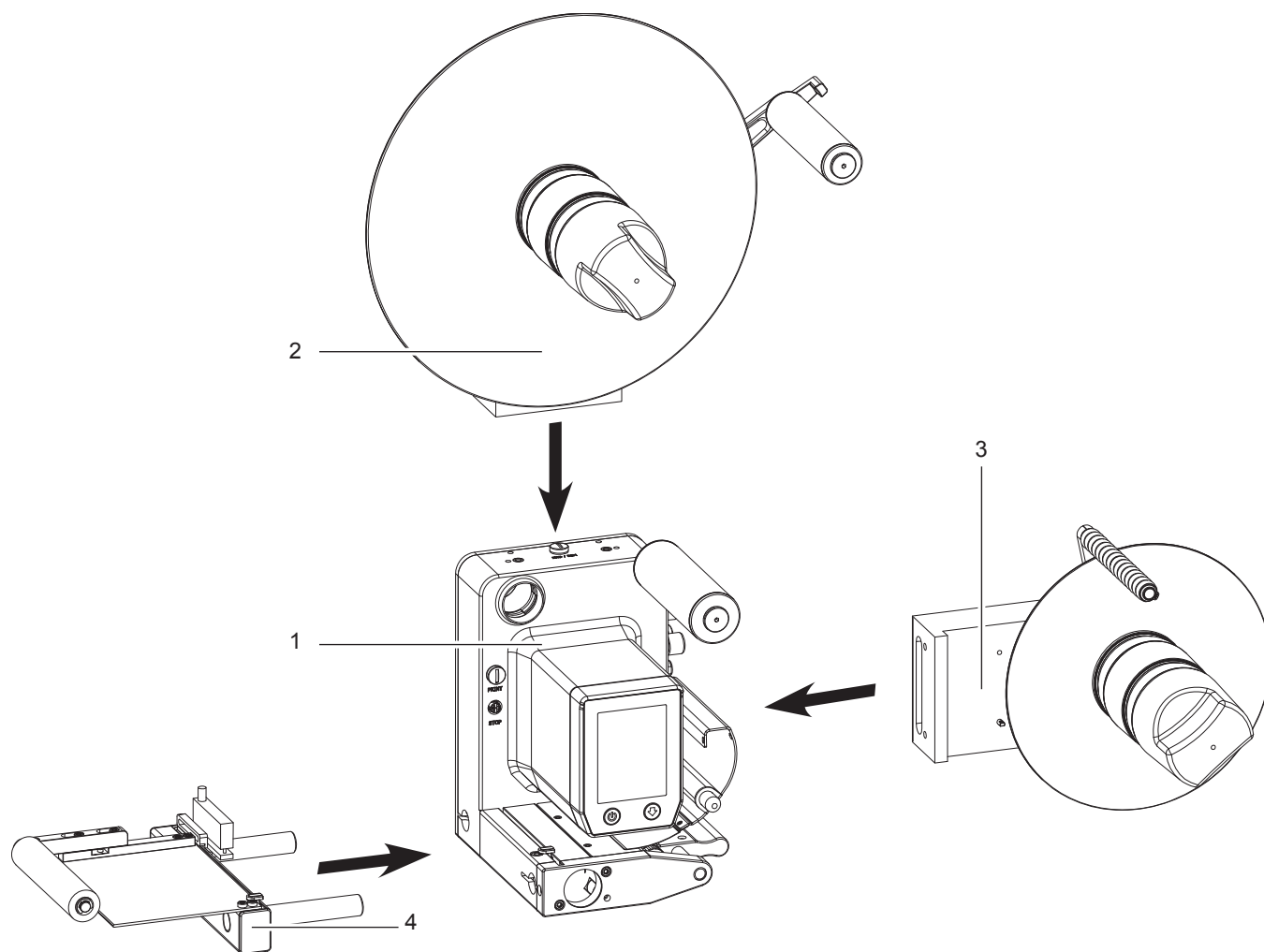


Figure 3 Components of the system

- 1 Base unit
- 2 Unwinder

- 3 Rewinder
- 4 Peel Module

3.1.1 Labeling Head Basic Unit

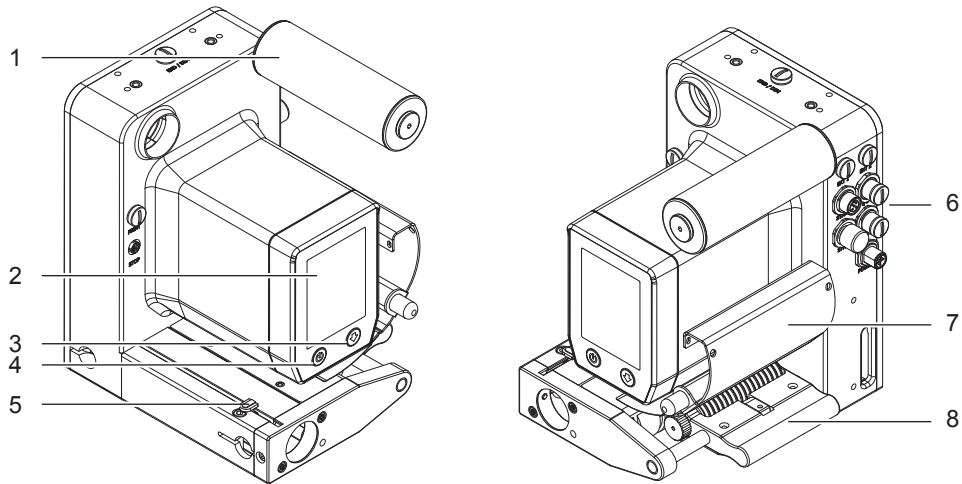


Figure 4 System components

- | | |
|-------------|--------------------------|
| 1 Roller | 5 Guide Aperture |
| 2 Display | 6 Electrical Connections |
| 3 Feed Key | 7 Ribbon Shield |
| 4 ON Switch | 8 Pinch Roller |

3.1.2 Unwinder

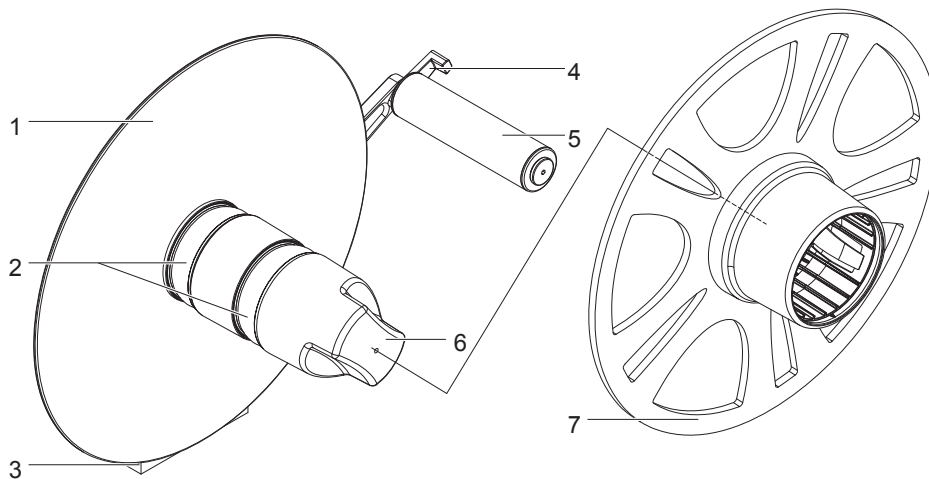


Figure 5 Unwinder

- | | |
|------------------------|------------------------------|
| 1 Plate | 5 Roller at the Pendulum Arm |
| 2 Binding Rings | 6 Turning Grip |
| 3 Unwinder Body | 7 Counterholder Optional |
| 4 Guiding Pendulum Arm | |

3.1.3 Rewinder

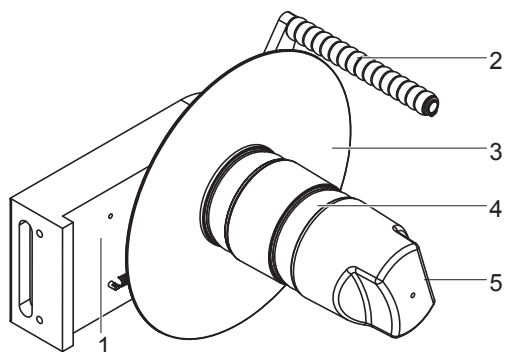


Figure 6 Rewinder

- | | |
|-----------------|-----------------|
| 1 Rewinder Body | 4 Binding Rings |
| 2 Pendulum Arm | 5 Turning Grip |
| 3 Plate | |

3.1.4 Peel Module

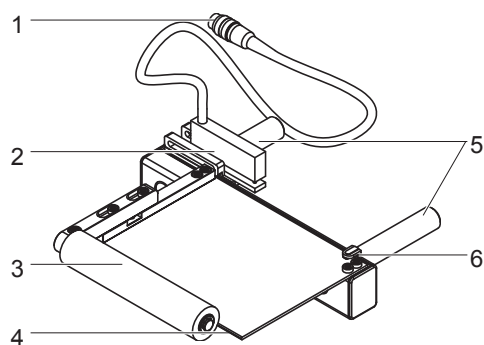


Figure 7 Peel module

- | | |
|--|----------------|
| 1 Round Plug - Connection to the Base Unit | 4 Peel Edge |
| 2 Forked Light Barrier | 5 Mounting Rod |
| 3 Wipe-down Roller | 6 Guide |

4.1 Safety during Operation

**Warning!**

Rotating parts! Be aware that clothes, hair, jewellery or the like does not come in contact with the rotating parts.

**Caution!**

Danger of being cut by fast moving paper. Do not reach into the area where the paper is being guided while the device is active!

4.2 Deposit Material

- ▶ Turn the grips of the media supply shaft and the arbor anti-clockwise to release their tension.
- ▶ Place the material onto and push it against the plate. If available put the counter-holder (option) onto the shaft.
- ▶ Push the cardboard core against the plate.
- ▶ Turn the grips of the media supply and arbor clockwise to fasten the material via the cardboard core.
- ▶ Push the pendulum arm down against the media supply shaft and unroll about 200 cm material of which the labels of the first 100cm should be removed.
- ▶ Release the guiding plate as displayed in the illustration to allow the placement of material through it.

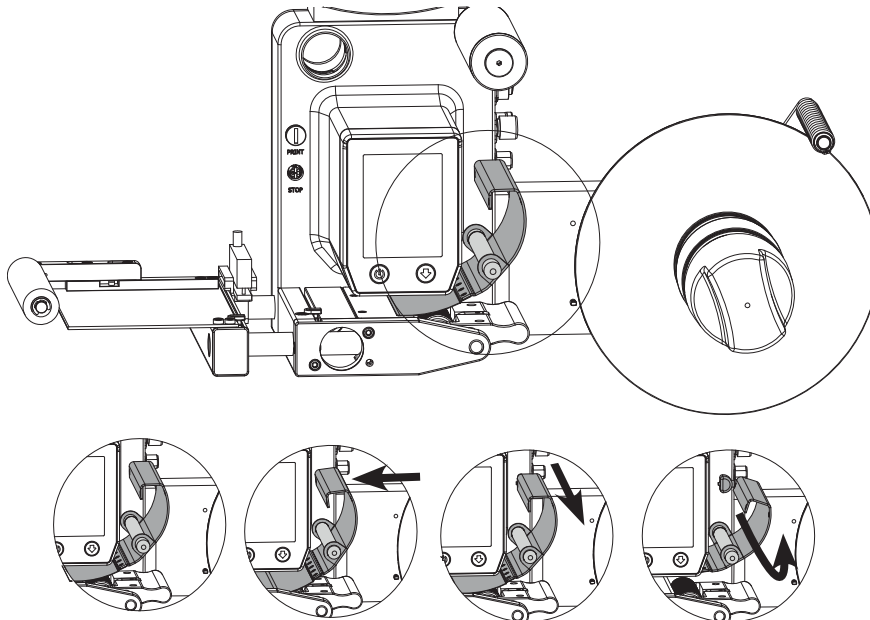


Figure 8 Guiding plate

- ▶ Open the pinch roller by lifting it via its grip in the direction of the display or drive.

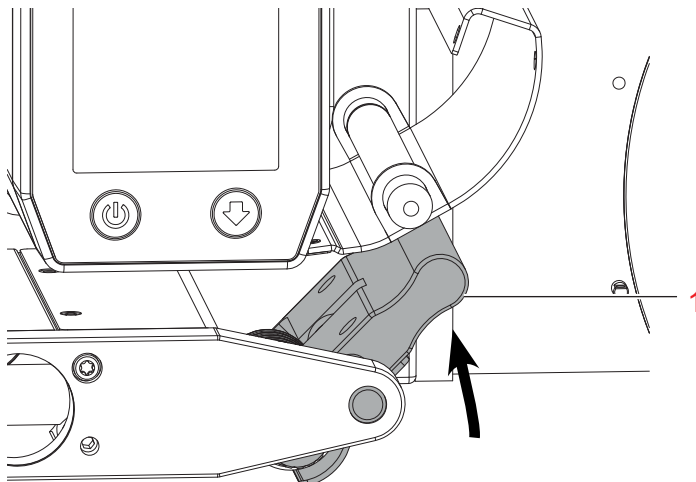


Figure 9 Opening the pinch roller

- Feed the material as illustrated

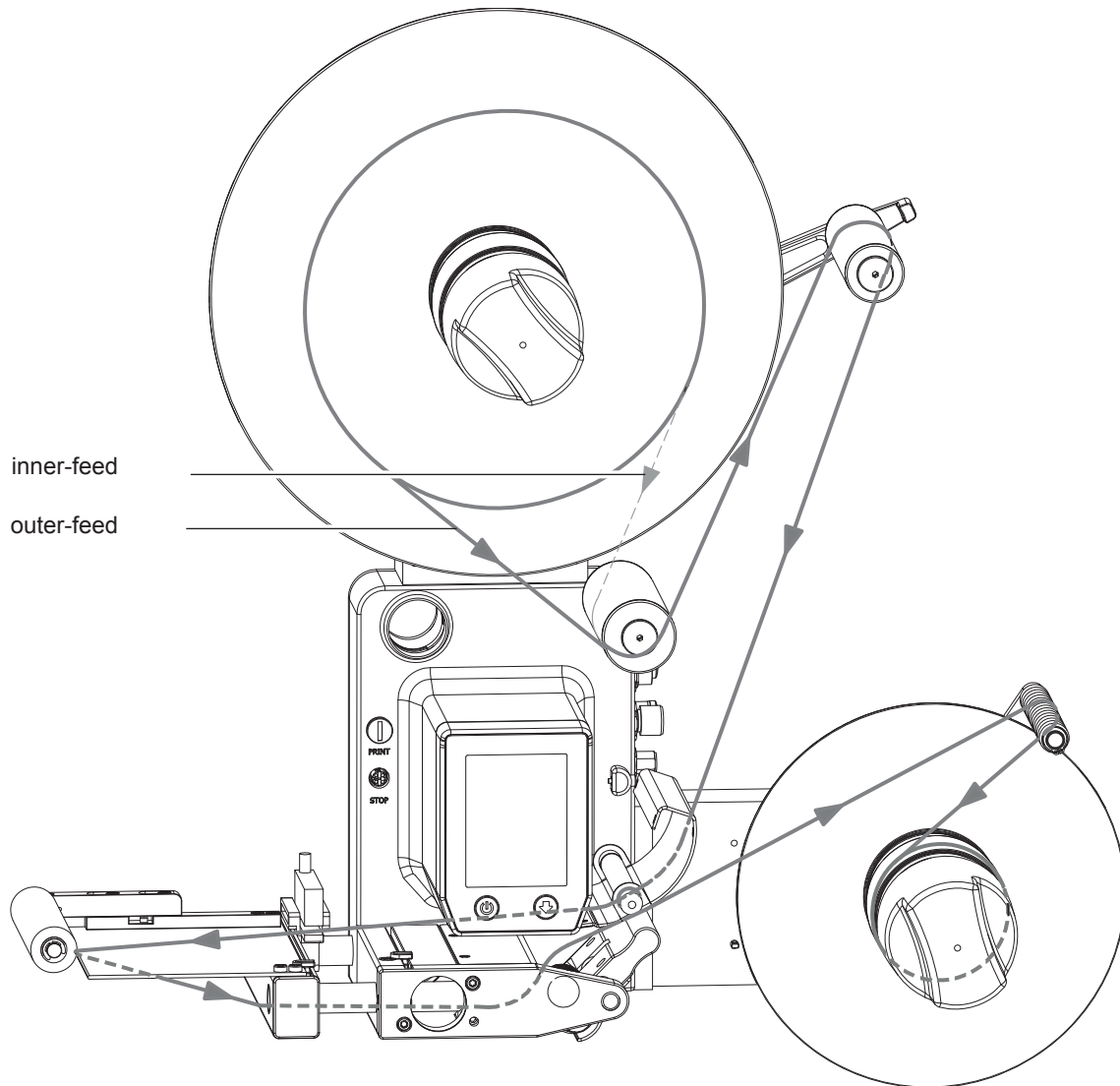


Figure 10 Material flow

- Fix the material on the arbor with a label.
- Snap the guiding plate back into place.
- Swing the pendulum arm of the rewinder back to the foundation and turn the grip of the rewinder shaft anti-clockwise to wind the material on.
- Fold the pinch roller into place.

4.3 Setting up the Label Sensor


Note!

When changing the label type the label sensor needs to be set up anew.

The acquisition of the label through the label sensor should result from the furthest part of the label in the direction of dispensation. ▷ Graphic

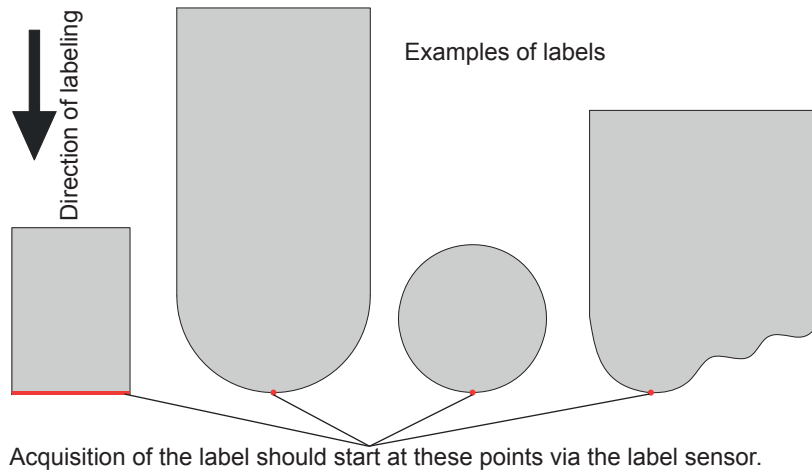


Figure 11 Acquisitions points of different types of labels via the label sensor

4.4 Switch on the Device

The device is connected to power and on standby.



the green pulses show that the device is in standby mode and if the button is pressed will switch to ready mode.

4.5 Operating panel

The operating panel consists of a touch screen and two buttons.



Figure 12 Operating panel / Starting screen



ON switch

If the button pulses green pushing it briefly will switch it to ready mode.



Feed button

Button to synchronize the system after labeling material has been changed or to manually adjust settings.

4.6 Test and Synchronization without external starting signal

After inserting new material a synchronization of the dispensation is necessary.

A new synchronization is also necessary if the labeling material was manually moved.

- Push feed  button repeatedly until the label is at the dispensing plate. This will also test the status of the label sensor.



Note!

The necessary adjustments for the optimization of the labeling and peeling processes are explained in detail in the service manual.

4.7 Speed



Button "Speed"

To adjust the speed of the labeling process the feed velocity of the dispenser can be set via the menu "speed" control. This is necessary when there is no automatic calibration over an external source.

In order to set this up the exact speed of the product must be determined and entered into the menu.

4.8 Start delay



Button "Start Delay"

Adjustment of the label's position on the product **in the transport and label direction** via the "Start delay" button.

The adjustment of the label position on the product occurs **perpendicular to the labeling direction** by mechanically shifting the assembly array from its base foundation.

4.9 Stop delay



Button "Stop Delay"

"Stop delay" determines the position of the dispensing plate. Ideally the label should protrude about 1 mm in the waiting position.

**Warning!**

Risk of death by electrocution!

- ▶ Especially when cleaning remove the device from the power grid!

It is advised to clean the device once a month.

**Attention!**

Damage to the device by harsh solvents or abrasive.

- ▶ Never use solvent or abrasive.
- ▶ To clean synthetic materials only use appropriate solvent or a mild alkaline solution.

- ▶ Clean the exterior surfaces with all purpose cleaner.
- ▶ The touchscreen is best cleaned with a lint-free cloth.
Normally it is sufficient to use small circular movements without applying pressure to the screen. For hardier dirt dampen the cloth with water. Alternatively display cleaning cloths can be used.

Pinch roller

Open the ribbon shield before you remove the pinch roller.

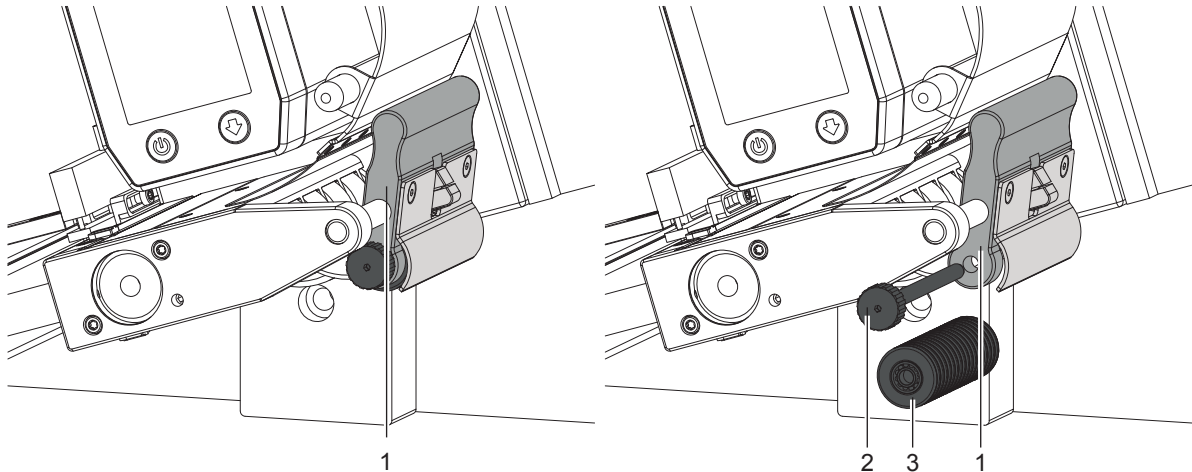


Figure 13 Cleaning the pinch roller

- ▶ Open the lever with the pinch roller.
- ▶ Loosen the thumbscrew (2) and remove the transport locking roller (3).
- ▶ Clean the transport locking roller.
- ▶ Restore functionality by reversing the process.

The following notifications are relevant for the user. The cause can possibly be remedied by the user. In the case that an error cannot be removed please contact a service technician.



Attention!

For issues that are not listed here or cannot be solved a service technician should be contacted.



Note!

All operational messages are listed in the service manual.

6.1 Information

Information of status is shown on the display.

Info No.	Display Text	How to fix
101	Stop delay > label	Reduce Start delay
102	Change the minimum stop delay	Reduce max. speed
103	Change minimum start delay	Reduce max. speed
106	Maximum feed < label	Increase feed length
107	Clamp roller still open	Close clamp roller , check stop sensor

6.2 Warning

Critical states, warnings and issues potentially affecting the workflow are shown on the display.

Warning No.	Display Text	How to fix
101	Reverse master encoder direction.	check if the product speed show a positive value when your master encoder is rotating. To reverse the direction by software, change the ME direction parameter (Speed - ME direction).
507	Low label reel ($\emptyset$ roll < parameter roll)	If you do not want to receive this warning at all, decrease the DIM diameter parameter (System - Presets - DIM diameter) to its minimum value.

6.3 Error

Error messages are visible on the display and interrupt the production cycle.

Error No.	Display Text	How to fix
101	There are no labels (<i>Value of error start</i>)	Check label material and check if your stop sensor is working
107	Label web broken	check the label web path for one-sided stress or check if the clamp roller's guard plate is too close to the shaft.
501	End of label reel.	If you don't want this error to be produced, disable the End of reel parameter (System - Error after - End of reel) .

7.1 Declaration of Incorporation



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Wilhelm-Schickard-Str. 14
D-76131 Karlsruhe
Germany

Declaration of Incorporation

We declare herewith that the following „partly completed machinery“ as a result of design, construction and the version put in circulation complies with the essential requirements of the **Directive 2006/42/EC on machinery** :

Annex I, Article 1.1.2, 1.1.3, 1.1.5, 1.1.6, 1.2.1, 1.2.4.1, 1.3.2, 1.5.1, 1.5.2, 1.5.8, 1.6.3, 1.7

In the event of any alteration which has not been approved by us being made to any device as designated below, this statement shall thereby be made invalid.

Device:	Labeling Head
Type:	IXOR
Applied EU Regulations	Applied Standards
Directive 2006/42/EC on machinery	• EN ISO 12100:2010 • EN ISO 13849-1:2015 • EN 60950-1:2006 +A11:2009+A12:2011+A1:2010+A2:2013
Person authorised to compile the technical file:	Norbert Schulmeister cab Produkttechnik GmbH & Co KG Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe
Signed for, and on behalf of the Manufacturer:	Karlsruhe, 05.10.2017  Roger Thiel Product Development Manager
cab Produkttechnik GmbH & Co KG Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe	

The product must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Directive on machinery

The documents according annex VII part B from the incomplete machinery are created and will commit to state agencies on request in electronic kinds.

7.2 EU Declaration of Conformity



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GmbH & Co KG
Wilhelm-Schickard-Str. 14
D-76131 Karlsruhe
Germany

EU Declaration of Conformity

We declare herewith that as a result of the manner in which the device designated below was designed, the type of construction and the devices which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EU Rules for Safety and Health. In the event of any alteration which has not been approved by us being made to any device as designated below, this statement shall thereby be made invalid.

Device:	Labeling Head
Type:	IXOR
Applied EU Regulations	Applied Standards
Directive 2014/30/EU relating to electromagnetic compatibility	• EN 61000-3-2:2014 • EN 61000-3-3:2013 • EN 61000-6-2:2005 • EN 61000-6-4:2007+A1:2011
Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment	• EN 50581:2012
Signed for, and on behalf of the Manufacturer:	Karlsruhe, 05.10.2017  Roger Thiel Product Development Manager
cab Produkttechnik GmbH & Co KG Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe	

