

Technical Manual



Labeling head

IXOR

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

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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 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 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 applying 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 and current version of the documentation are saved in the base unit. You can read it via FTP.

1.3 Safety Instructions

**Attention!**

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

- Before mounting the delivered components disconnect the labelling head from the power supply and close the shutoff valve of the applicator.
- 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.

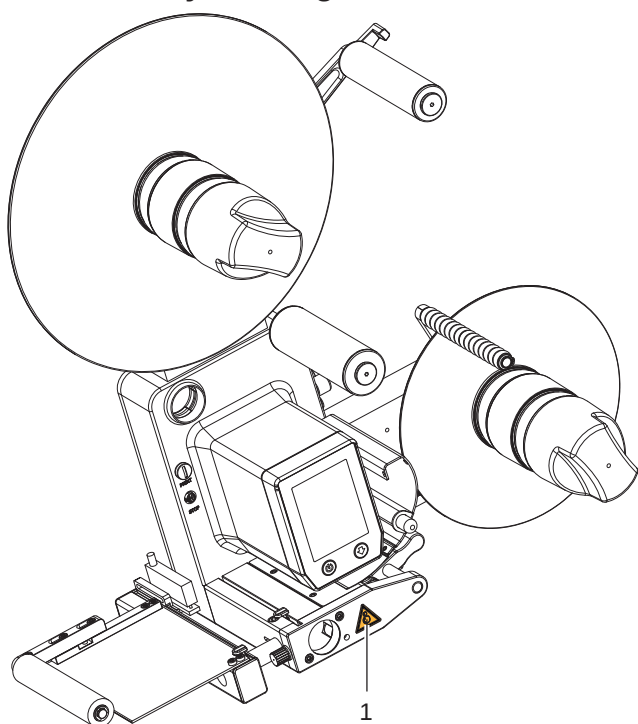
1.4 General Security Instructions

- In operation, moving parts are easily accessible.
During operation do not reach into these zones and keep long hair, loose clothes, and jewelry away.
- 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.
- 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.
- There are various warning stickers on the device. They draw your attention to dangers. Warning stickers must therefore not be removed, as then you and other people cannot be aware of dangers and may be injured.

1.5 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.

1.6 Safety Markings



1:



Danger of injury by rotating parts.

Figure 1 Safety marking



Attention!

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

1.7 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.

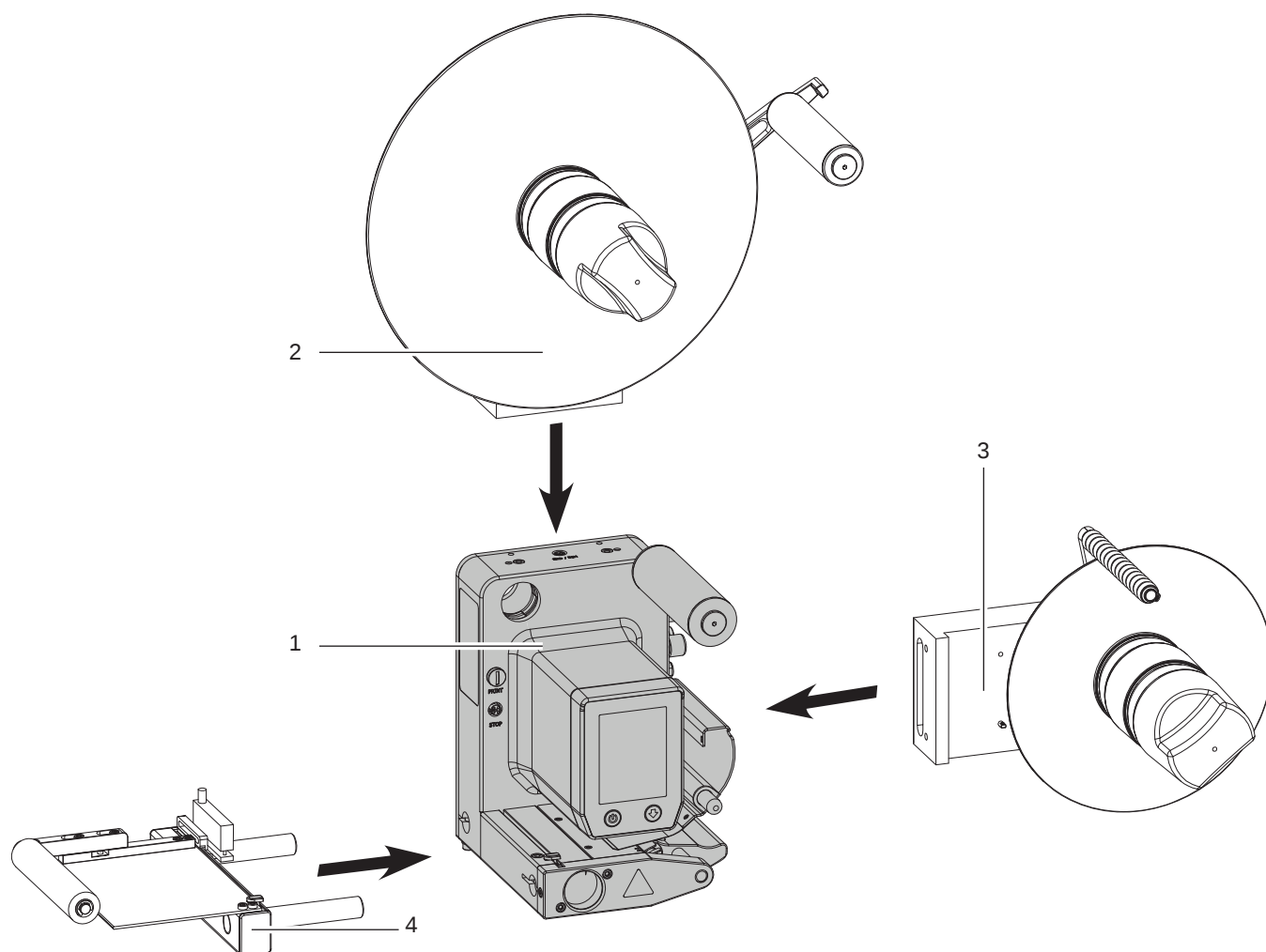


Figure 2 Components of the system

- 1 Base unit
- 2 Unwinder

- 3 Rewinder
- 4 Peel module

3.1 Base Unit

**Danger!**

Risk of death by electrocution!

- ▶ The power cable with shockproof plug (Schuko-plug (protective contact)) is to be kept freely accessible at all times during operation and serves as a separation mechanism of the power supply by pulling it out of the plug point.
- ▶ In the version without a shockproof plug an approved separation mechanism, disconnecting every pole of the contact opening width by at least 3mm, securely interrupting the power supply, must be integrated into the device.
- ▶ Do not open the casing while the device is in operation.
- ▶ Especially when cleaning remove the device from the power grid and wait 10 minutes for the device to fully discharge.
- ▶ Under no circumstances may the cover be removed by anyone not qualified and accredited with electronic knowledge such as service personnel. Electrical connection must only be carried out by a certified electrician.
- ▶ For power supply wiring, strictly conform to the Local Regulation in each country.

**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.

**Attention!**

Insufficient earthing can lead to disruptions during operation.

Ensure that all electrical devices connected to the IXOR, as well as connecting cables are properly earthed.

**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.

3.1.1 Overview

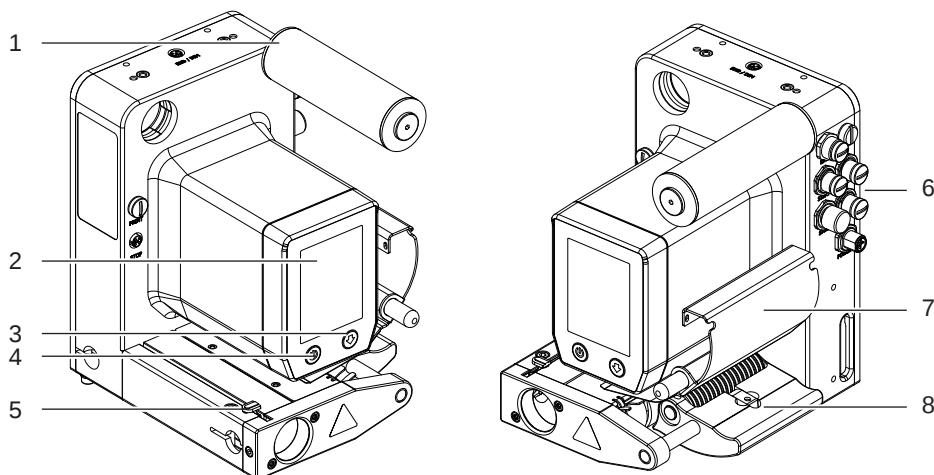


Figure 3 Components of the systems

- | | |
|----------------|--------------------------|
| 1 Guide roller | 5 Label aperture |
| 2 Display | 6 Electrical connections |
| 3 Button START | 7 Brake plate |
| 4 Button ON | 8 Pinch roller |

3.1.2 Assembly Base Unit

Assembly on stand with fixed x-position

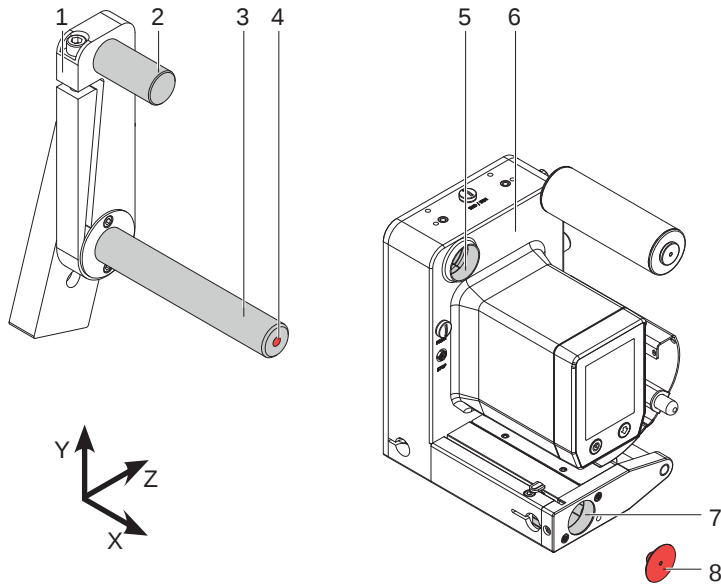


Figure 4 Assembly base unit - fixed

1. Slide the base unit (6) with the opening (5) on holm (2) of the stand (1) with the opening (7) on holm (3).
2. Push the base unit (6) to the back stop.
3. Tighten screw (8) unto the tread (4).

Assembly on Stand with Variable x-position

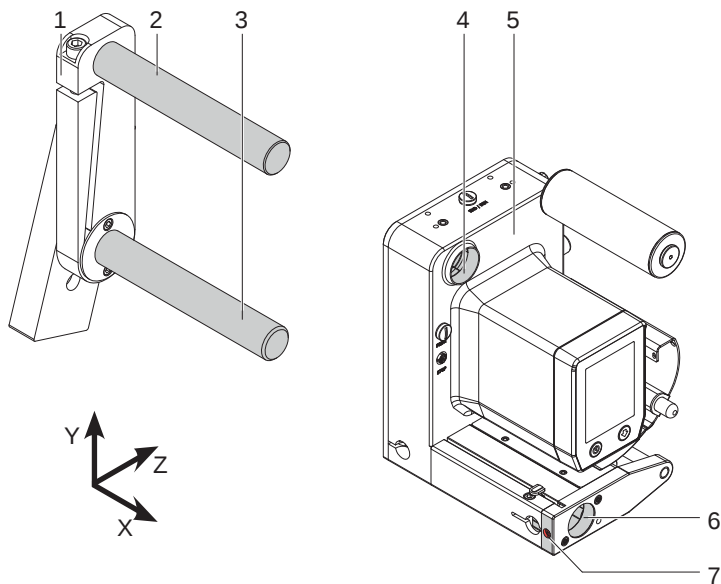


Figure 5 Assembly base unit - variable

4. Place the base unit (5) with opening (4) on holm (2) of the stand (1) whilst placing opening (6) unto holm (3).
5. Push the base unit (5) to the desired position on the x-axis.
6. Tighten screw (7).

3.2 Rewinder

3.2.1 Overview

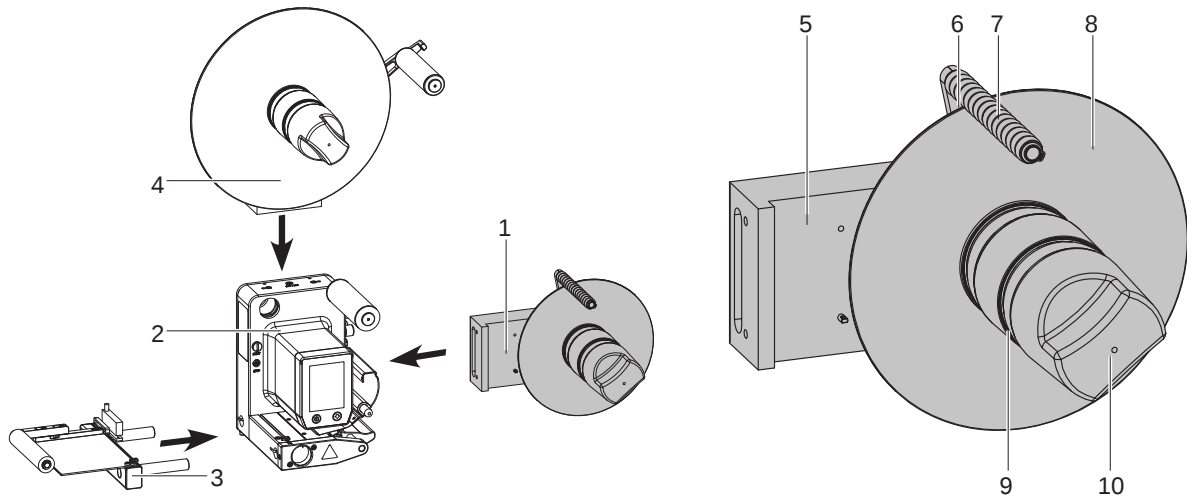


Figure 6 Overview

- 1 Rewinder
- 2 Base unit
- 3 Peel edge
- 4 Unwinder
- 5 Rewinder body

- 6 Pendulum arm
- 7 Roller on pendulum arm
- 8 Plate
- 9 Clamping rings
- 10 Turning grip

3.2.2 Dismounting and Mounting the Cover



Danger!

Risk of death by electrocution!

- Especially when cleaning remove the device from the power grid and wait 10 minutes for the device to fully discharge.

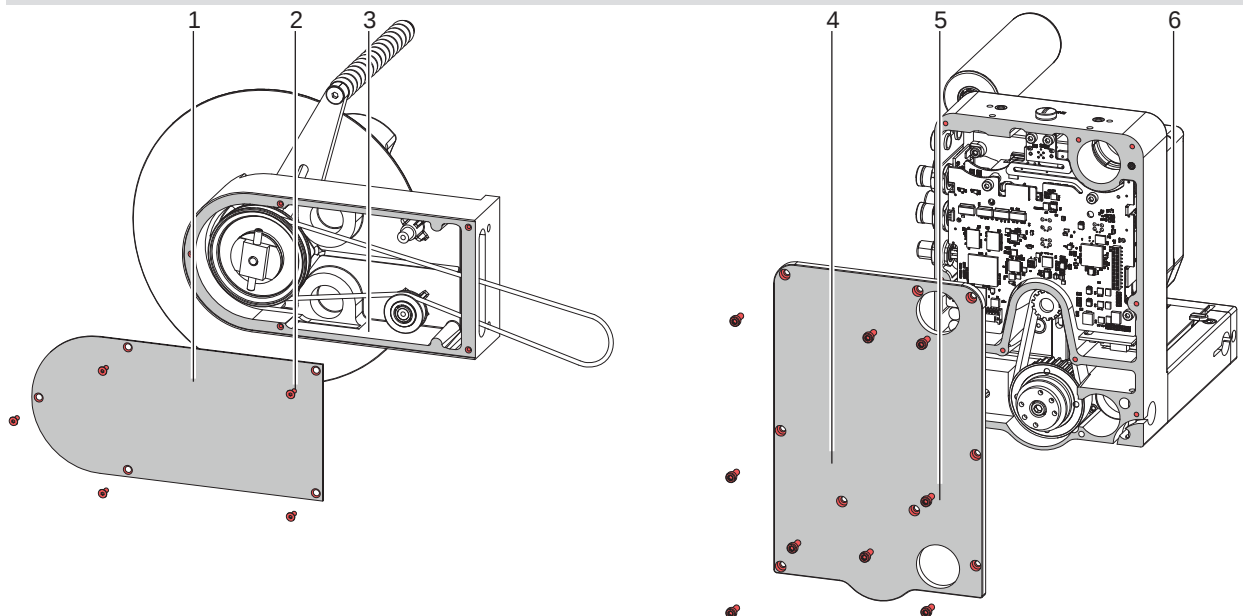


Figure 7 Mounting/dismounting the cover

To mount the rewinder (3) to the base unit (6) the back covers of both devices need to be removed.



Attention!

Protect opened devices from dirt to ensure functionality.

1. Loosen the five screws (2) of the rewinder (3) and remove the cover (1).
2. Unscrew the eight screws (5) of the base unit (6) and remove the cover (4).

3.2.3 Mounting the Rewinder

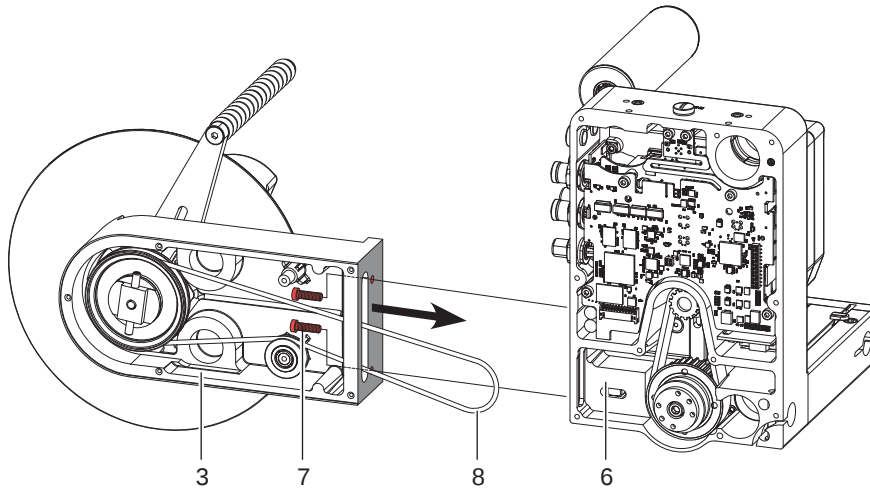


Figure 8 Mounting the rewriter to the base unit

- Place the rewriter (3) to the base unit (6) as illustrated.

**Attention!**

When assembling both devices ensure that the belt is not hindered for the best power transmission. In case of damage replace the belt.

1. Fasten the rewriter (3) to the base unit (6) with the two screws (7) supplied with the delivery.
2. Feed the belt (8) through the opening of the rewriter (3) and the opening of the base unit (6).

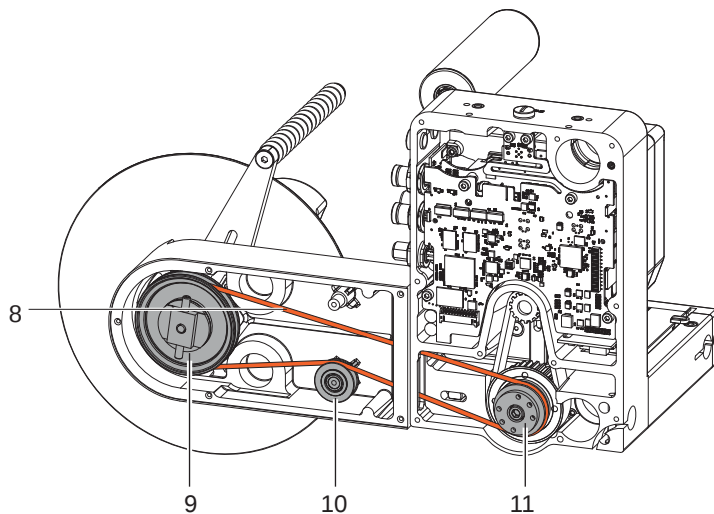


Figure 9 Belt guide

3. Thread the belt (8) over the belt gear (9) of the rewriter and over the belt gear (11). The belt would run on top of the belt gear (10).
4. Fasten both covers to their devices again. ► „Removing and fastening the cover “ on page 10.

3.2.4 Cleaning

**Note!**

Don't use pressure air, a brush or the like for cleaning. Use an extraction system or a wet fluffless cloth.

3.3 Unwinder

3.3.1 Overview

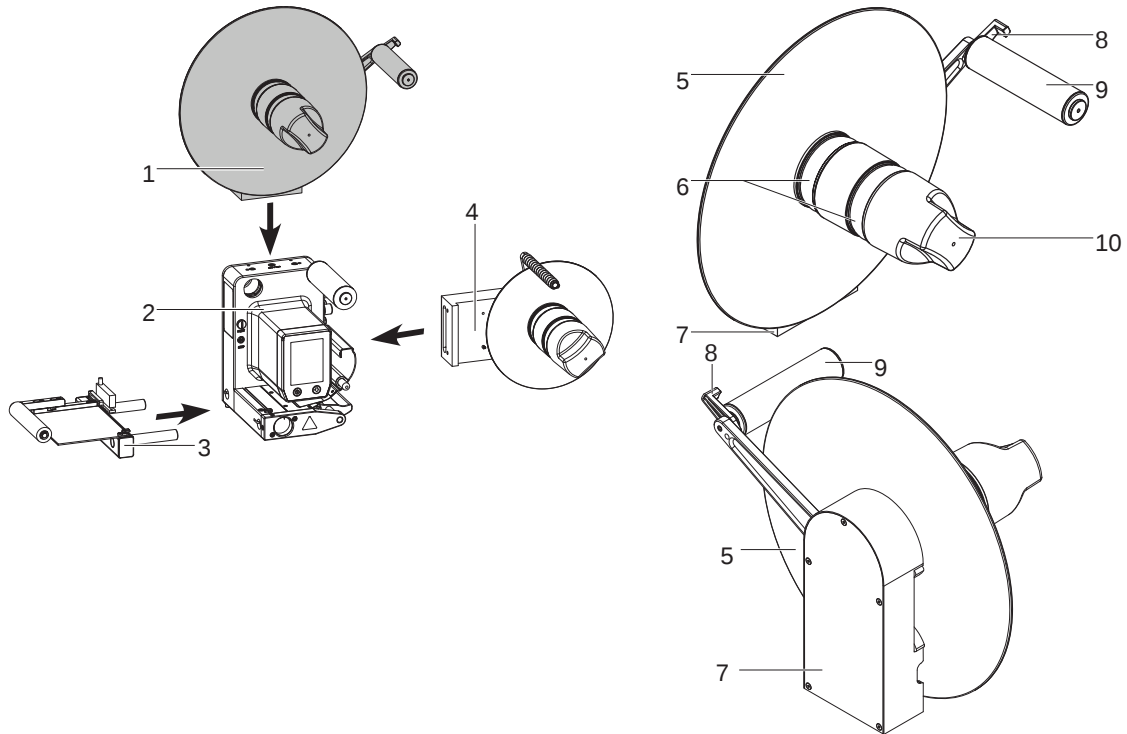


Figure 10 Unwinder

- 1 Unwinder
- 2 Base unit
- 3 Peel edge
- 4 Rewinder
- 5 Plate

- 6 Binding rings
- 7 Unwinder body
- 8 Guidance of the pendulum arm
- 9 Roller of pendulum arm
- 10 Turning grip

3.3.2 Mounting the Unwinder

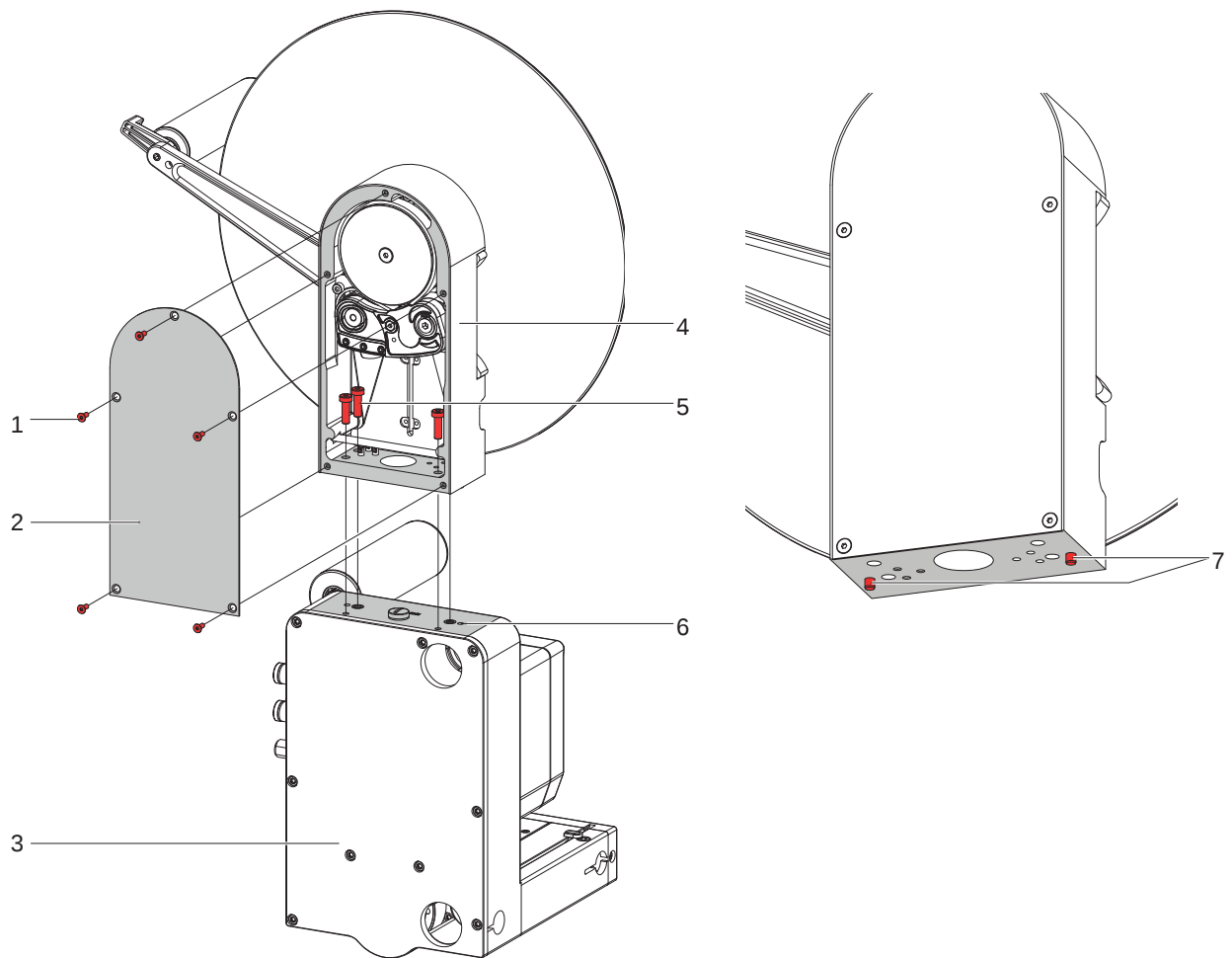


Figure 11 Mounting the unwinder

The unwinder moves passively and is not accelerated electronically or via transmission.
The unwinder is fastened with four screws.

1. Remove the five screws on the rear side of the unwinder (4).
2. Place the unwinder (4) so that the guiding pins (7) are at the bottom part of the unwinder (4) and place them in the appropriate openings (6) on the top part of the base unit (3).
3. Screw the unwinder (4) to the base unit with the cylinder screws M5x16 (5).

Should further settings, such as adjustments to the brake of the unwinder, be necessary the cover can stay detached.

4. Attach the cover (2) to rear side of the unwinder (4) with the screws (1).

3.4 Peel Module

3.4.1 Overview

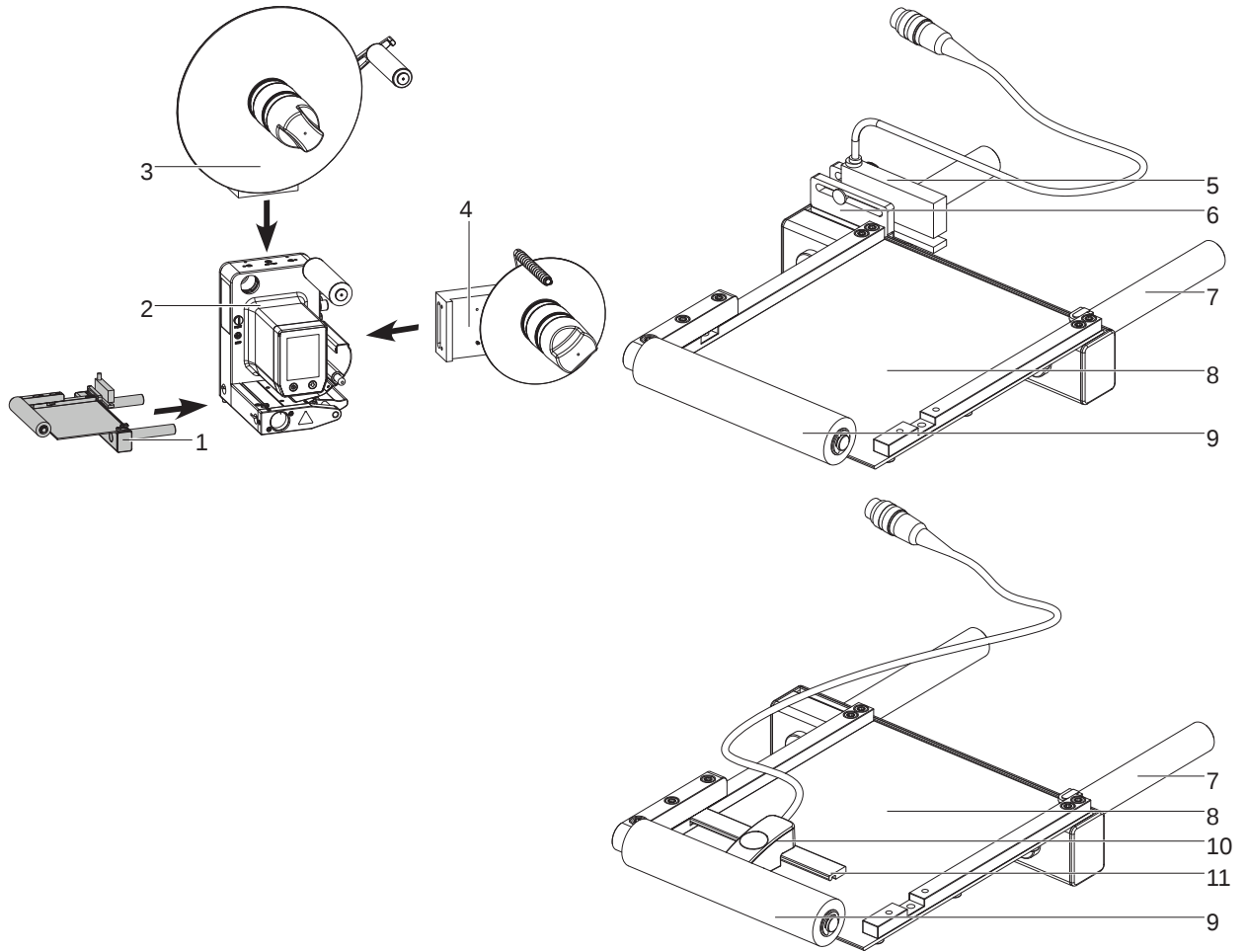


Figure 12 Peel module

1 Peel module

2 Base unit

3 Unwinder

4 Rewinder

5 Forked light barrier

6 Holder for forked light barrier

7 Assembly rod, variable length

8 Peel edge

9 Wipe-down roller

10 Label sensor CEON

11 Profile for label sensor CEON

3.4.2 Mounting the Peel Module

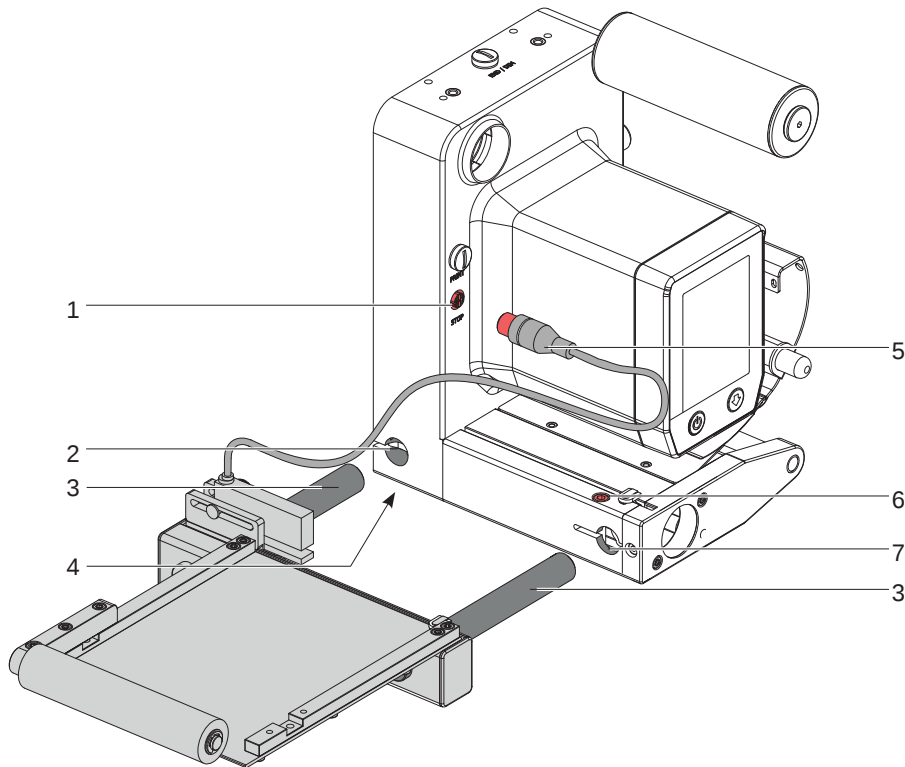


Figure 13 Mounting the peel module

The mounted peel module consists of peel edge, assembly rods, forked light barrier or label sensor CEON and optional wipe-down roller.

1. Loosen screws (4 and 6) on the base unit.
2. Move in the assembly rods (3) into the holes (2 and 7) .
3. Tighten screw (6) and screw (4) at the bottom side of the base unit to fix the peel module.
4. Put in the round plug (5) of the forked light barrier or the label sensor CEON into the connector START (1) of the base unit.
5. The forked light barrier or the label sensor CEON is adjusted when the *Auto-Teach* mode has been activated.

3.4.3 Auto Teach of the Forked Light Barrier/Label Sensor CEON



Figure 14 Selection sensor adjustment auto - teach

1. Switch on the base unit.
2. Press the button Stop Delay (1) at least 3 sec. up to the menu *Auto-Teach* is visible.
3. Press the button *Continue* to start the calibration.
4. After successful completion of the calibration (Auto-Teach), press the button *Continue* again.

**Note!**

The push button for manual teach on the CEON sensor is default* deactivated if the CEON sensor is installed on an IXOR.

* Menu / System / Presets / CEON button on/off (firmware higher 1.152-1)

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.

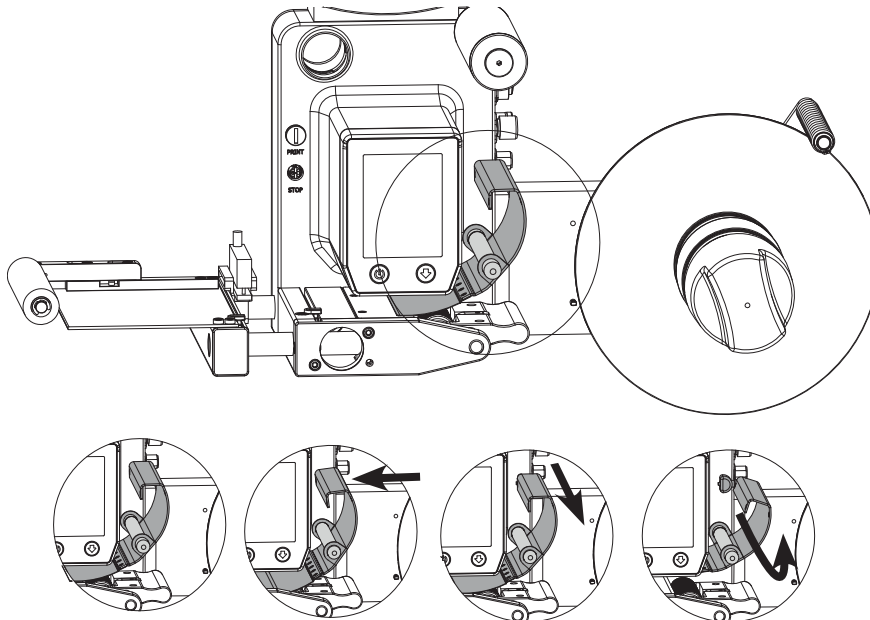


Figure 15 Guiding plate

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

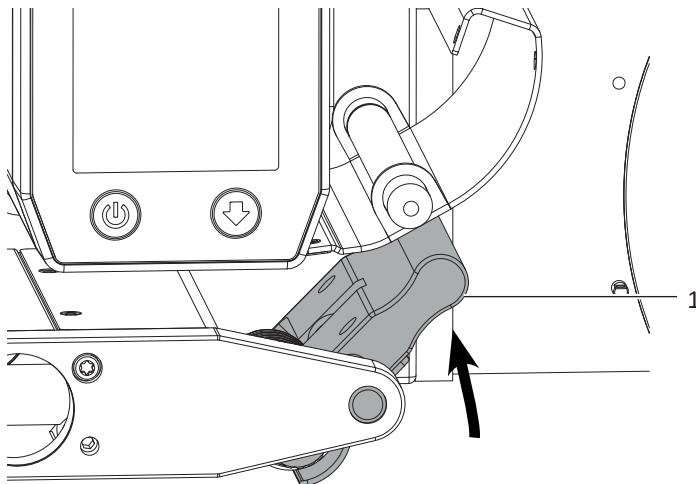


Figure 16 Opening the pinch roller

- Feed the material as illustrated

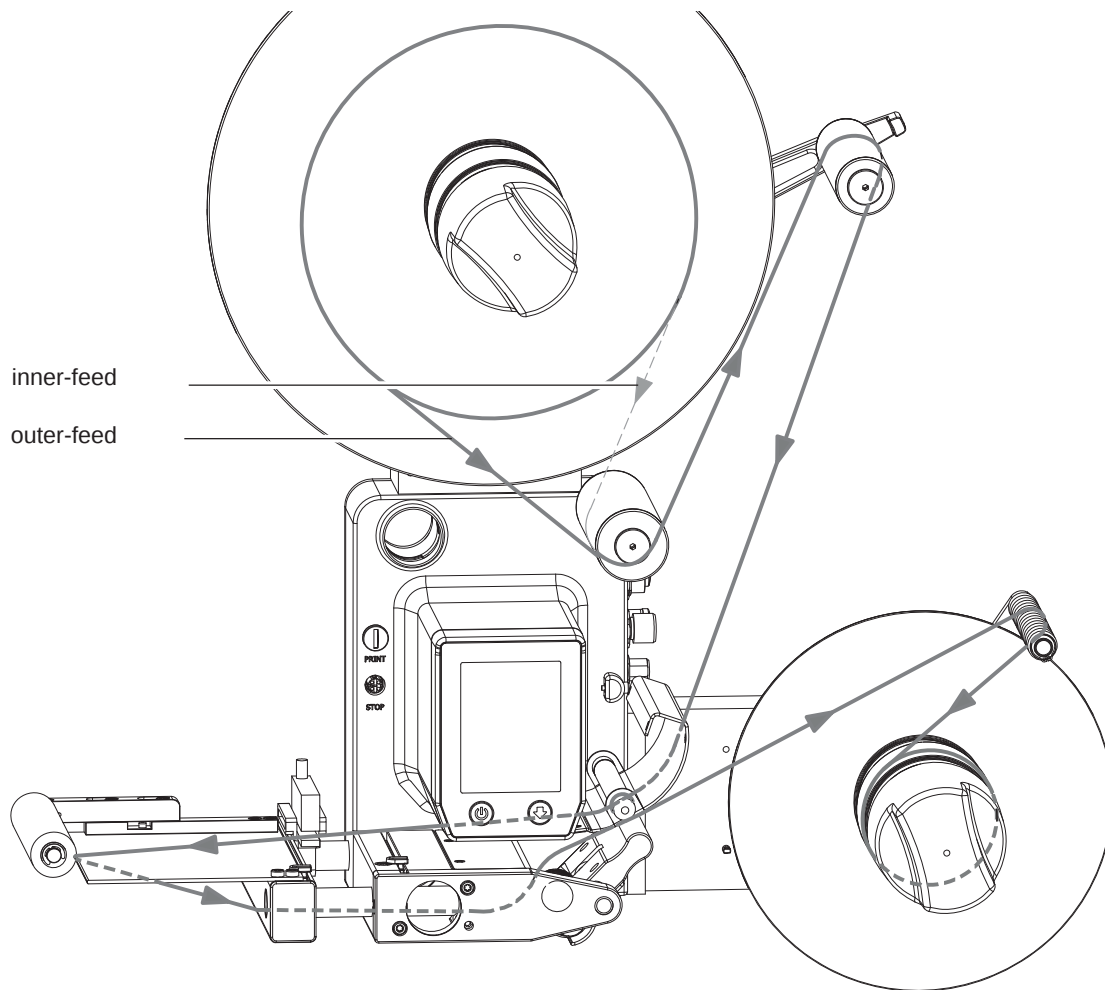


Figure 17 Material flow

- 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

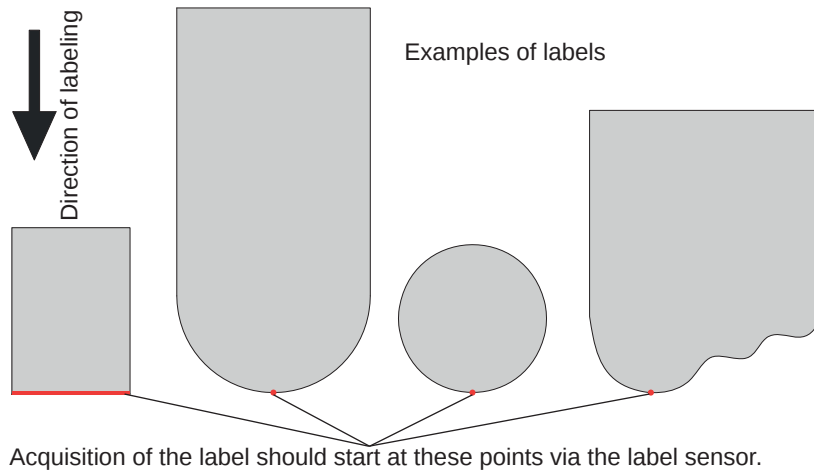


Figure 18 Acquisitions points of different types of labels via the label sensor

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 19 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 Cleaning

**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.

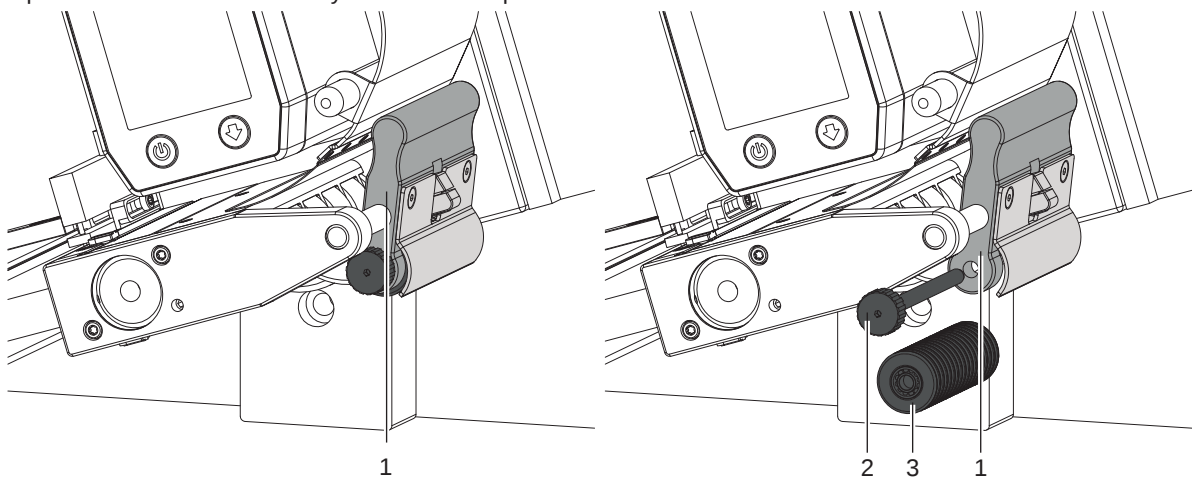


Figure 20 Cleaning the pinch roller

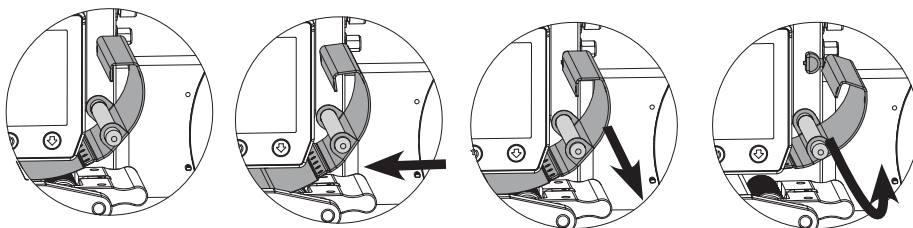


Figure 21 Release material brake

- 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.

4.7 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.
- ▶ Restore functionality by reversing the process.

4.8 Long-term operation

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

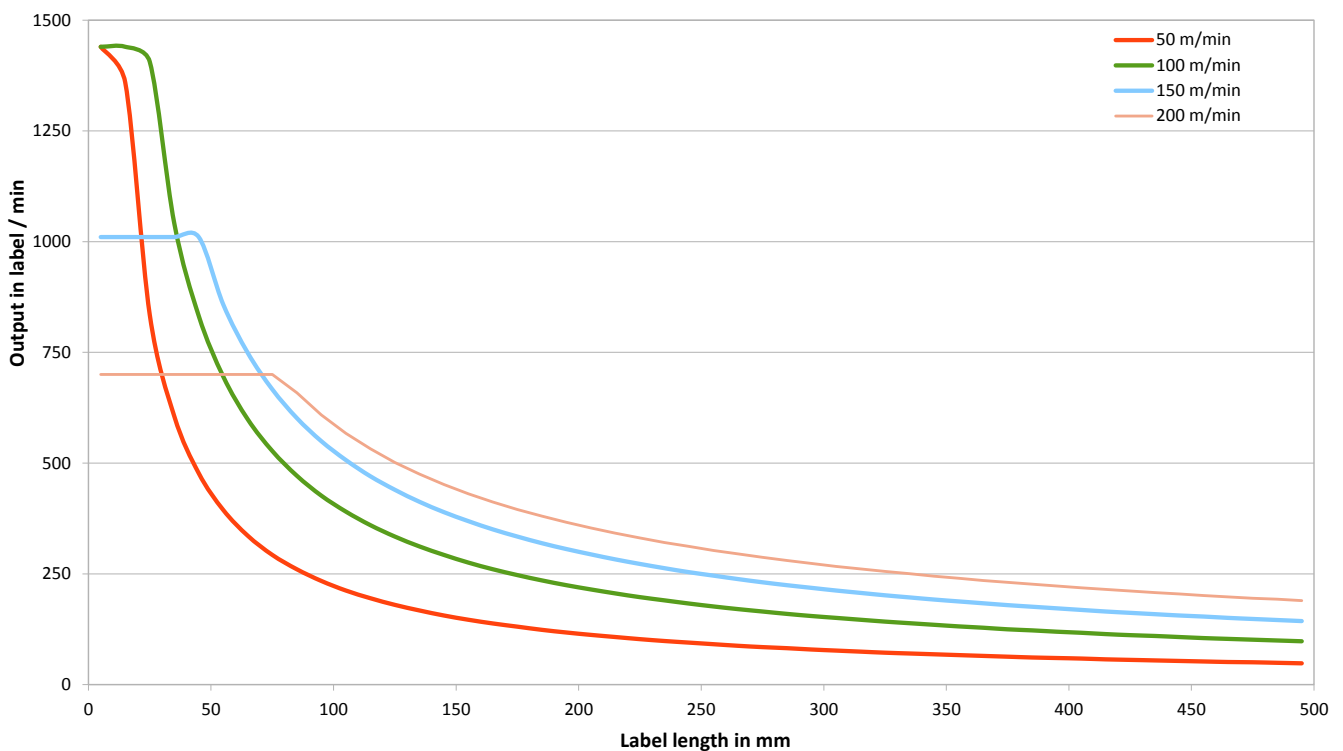


Figure 22 Label output

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

then:

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

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

5.1 Setting up the Rewinder - Pendulum Arm

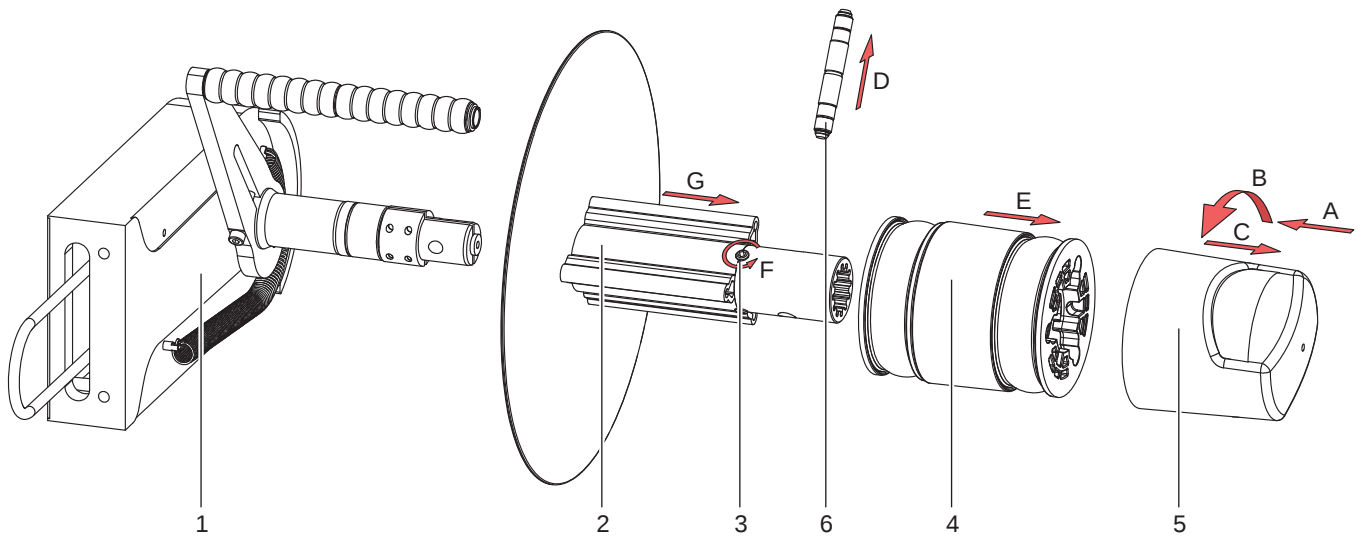


Figure 23 Demounting the rewriter

1. Push the turning grip (5) in the direction (A) and turn it counter-clockwise direction (B) to pull it off in direction (C).
2. Pull the pin (6) out of the rewriter core in the direction (D).
3. When pulling off the clamping rings and spacers (4) in direction (E) take care to place them aside in the same order as they are mounted.
4. Loosen the two screws (3) and pull the rewriter core (2) from the axis of the rewriter (1) in direction (G).

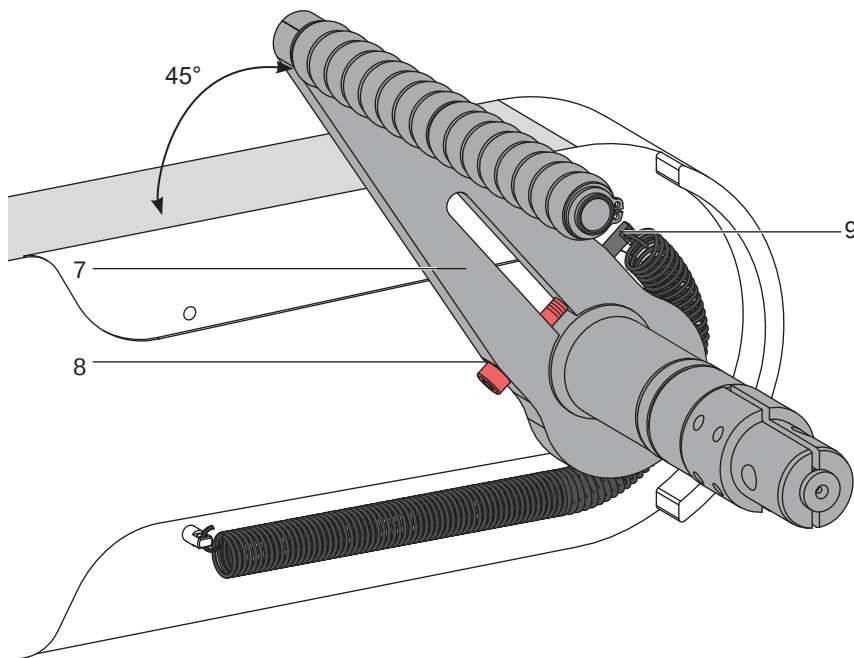


Figure 24 Adjusting the position of the pendulum arm

5. Loosen screw (8).
6. Turn the pendulum arm (7) 45° to the base unit.
7. Tighten screw (8) so the lever cannot turn against the axis. The screw (8) may not hit the spring bolt (9)

5.2 Setting up the Unwinder - Swing Arm/Belt-brake

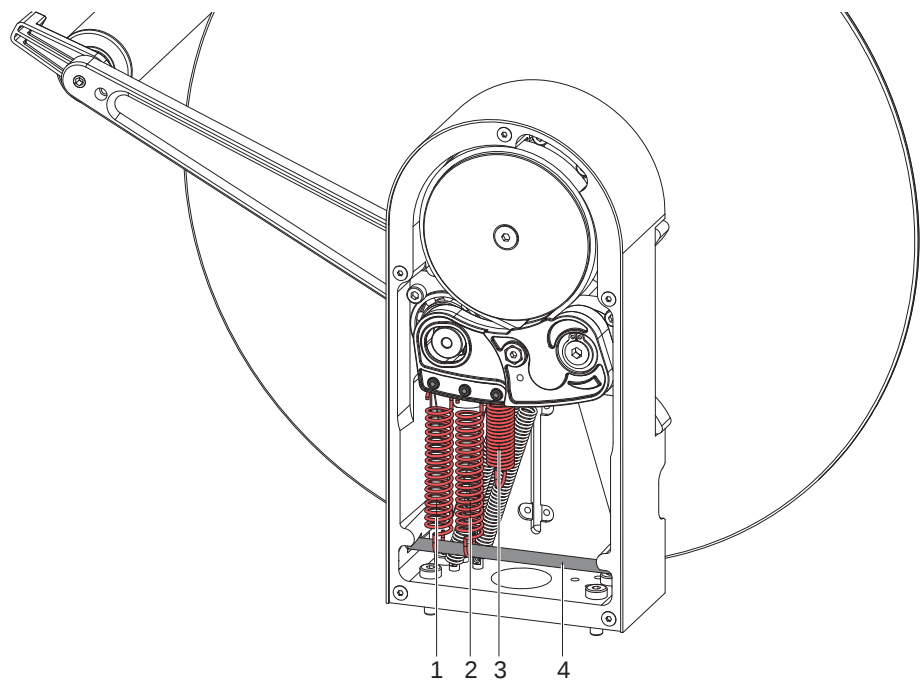


Figure 25 Spring force according to material

► Springs (1-3) according to the weight of the material on the unwinder (4).

Material outer diameter	mm	310			410		
Working width	mm	124	186	248	124	186	248
Active springs in the horizontal assembly		1	1	2	1	1	2
Active springs in the vertical assembly		1	2	3	1	2	3

Table 1 Standard settings - springs in the unwinder

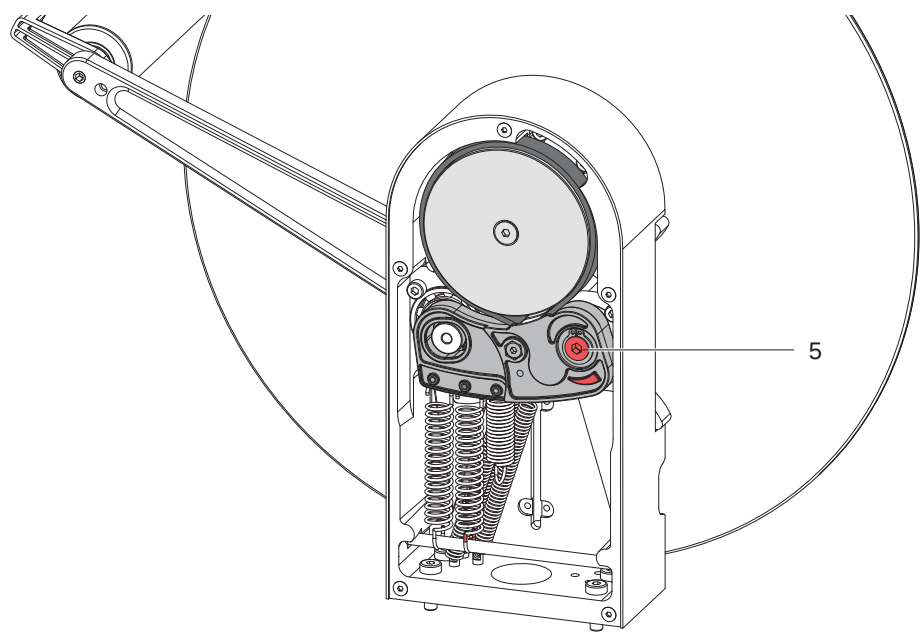


Figure 26 Adjust the activation point of the break in conjunction with the position of the pendulum arm

► Set the activation point of the break by turning the eccentric (5) so that the pendulum arm does not impact the stopper and tear the material.

6.1 Base unit: Replacing the Belt

1. Disconnect the device from the power source.

**Danger!**

Risk of death by electrocution!

- When adjusting or cleaning remove the device from the power grid and wait 10 minutes for the device to fully discharge.

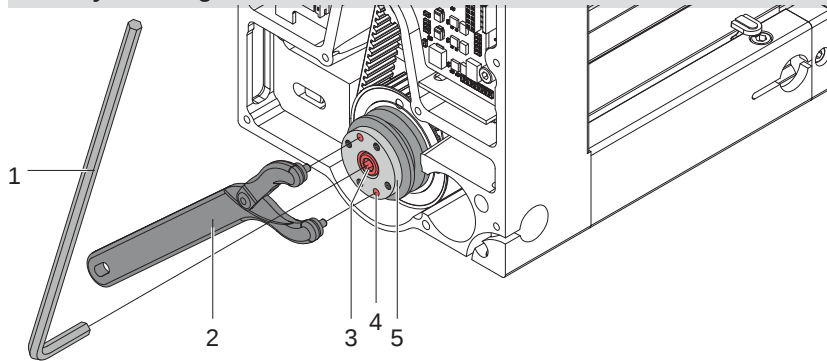


Figure 27 Loosening the eccentric

2. Remove the cover. ► „3.2.2 Dismounting and Mounting the Cover“
3. Place the face pin spanner wrench (2) in the two holes (4) without thread of the cone (5) and hold it steady.
4. Use a 5 mm hexagonal wrench (1) to loosen screw (3).

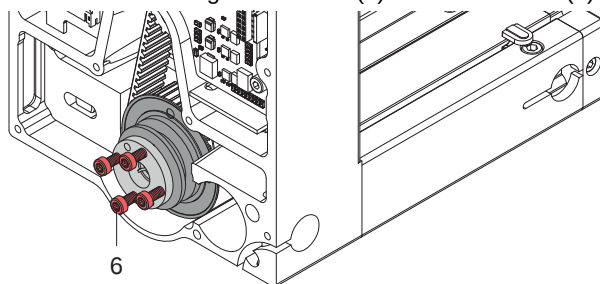


Figure 28 Pushing out the eccentric

5. Screw the four M4 screws (6) from the lid into the threaded holes of the cone (5) till the backstop.
6. Tighten the screws (6) alternately. Turn them in about 3 mm.
7. The cone (5) will be pushed out and can be taken out.

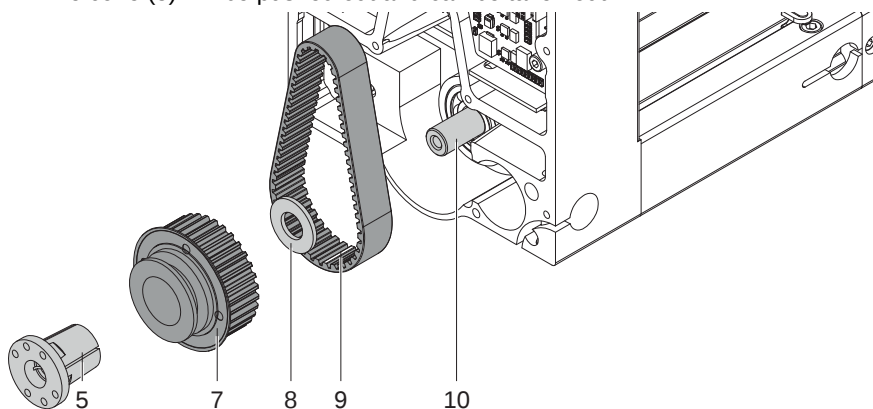


Figure 29 Remove the toothed belt and gear

8. Pull the gear (7), washer (8) and toothed belt (9) from the shaft (10).
9. Assemble the components in the reverse order.

**Note!**

When assembling, tighten the screw (3) with a tightening torque of 14 Nm.

6.2 Base unit: Replacing the Roller

1. Demount the cone and the gear. ▷ „6.1 Base unit: Replacing the Belt“
2. Unscrew and remove the screws (2).
3. Swing off the pinch roller (3).
4. Pull off the guiding-grid (1).

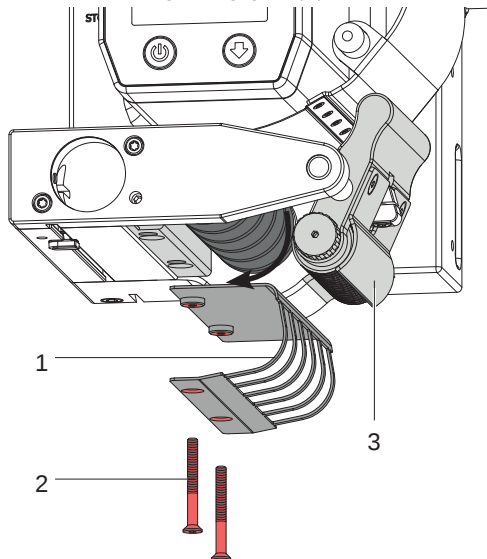


Figure 30 Demounting the guiding-grid

5. Loosen (6) screws.
6. Remove the side plate (5).
7. Pull off the pinch roller(4).

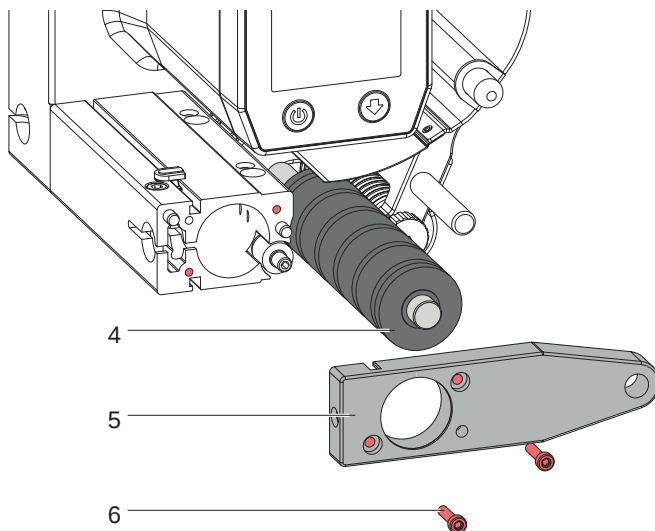


Figure 31 Removing the pinch roller

8. Reconstruction takes places in the reverse order.

6.3 Base unit: Pressure Roller

**Danger!**

Risk of death by electrocution!

- Especially when cleaning remove the device from the power grid.

It is beneficial to clean the device at least once an 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 outer surfaces with a general purpose cleaner.
- The touchscreen should be cleaned with a lint-free cloth.
Normally it is sufficient to wipe over the touchscreen in circular movements. During this process it is desirable apply as little as possible pressure to the touchscreen.
With tougher stains it is usually sufficient to dampen the cloth with clean water.
Alternatively specialized screen cleaners can be used to clean the touchscreen.

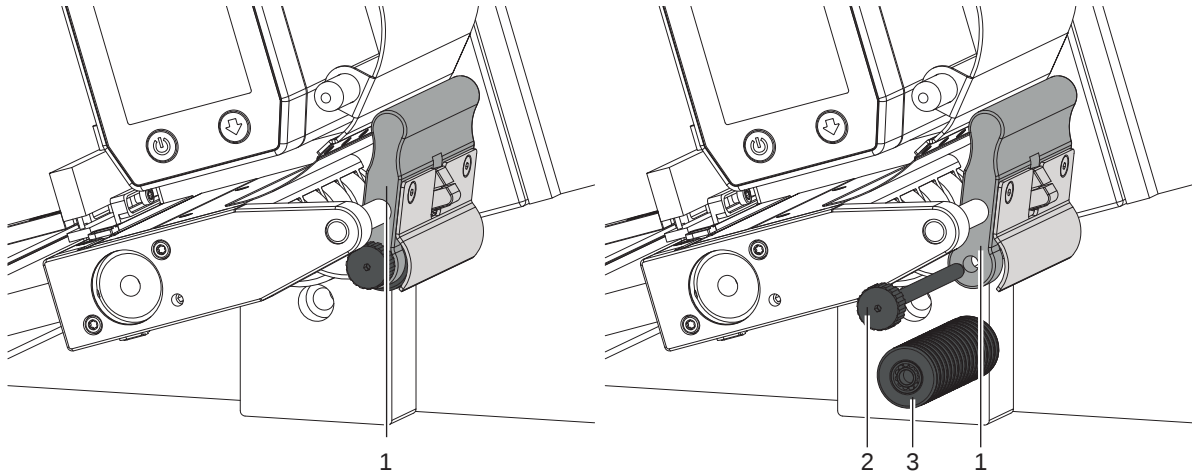
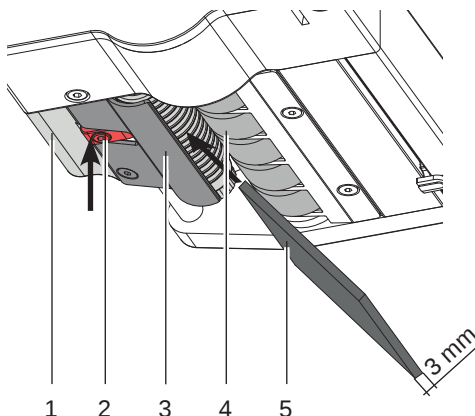
Pressure roller

Figure 32 Cleaning the pinch roller

- Lift the lever of the pinch roller (1).
- Loosen the knurled screw (2) and remove the pinch roller (3).
- Clean the pinch roller.
- Reassemble the pinch roller in the reverse order.



If the stopper (2) has been loosened by loosening the screw, the stopper must be readjusted.

Otherwise the protective plate (3) can grind on the transport rollers (4).

- Place an approx. 3mm thick spacer between the protective plate (3) and the transport rollers (4).
- Fold and close the pressure roller assembly (1).
- Press the stopper (2) in the direction of the arrow and tighten the screw on the stopper.
- Fold down and open the pressure roller
- Remove the spacer.

	Base unit	Unwinder	Rewinder
Service A 2,5 m. cycles or ¹ 50 km		Change damper (27/31)²	Change round belt (6)²
Service B 10 m. cycles or ¹ 200 km	Change pinch roller (23)²	- Service A - Change brake lever with springs (14)² - Change swing arm springs (9)²	- Service A - Change lever bearing - Change axial bearing - Slide bearing cleaning and grease
Service C 50 m. cycles or ¹ 1000 km	- Service B - Change belt (33)² + roller (15)²	Service B	- Service B - Change clutch lining

¹ First arrived value is essential

² Position number in the spare parts list

Base unit			
cab part number	Working width	Description	Number of pieces
5971227.001	124 mm / 186 mm	Pinch Roller	1
6110109.001	248 mm / 310 mm	Pinch Roller	1
5907112.001		Belt	1
5971229.001	124 mm	Roller	1
5971325.001	186 mm	Roller	1
5971323.001	248 mm	Roller	1
6121111.001	310 mm	Roller	1
Unwinder			
cab part number		Description	Number of pieces
5983279.001		Damper	1
5971283.001		Damper	2
5906323.001		Spring	3
5977633.001		Brake lever	1
Rewinder			
cab part number	Diameter	Description	Number of pieces
5906328.001	210 mm	Round belt 5.0x585	1
5906331.001	290 mm	Round belt 5.0x680	1
6122053.001		Bracket L	1
6122055.001		Bracket R	1
5977606.001		Axial Bearing	1
5970959.001		Friction Surface	1
5907092.001		High performance grease	1
6122048.001		Service Kit L	1
6122049.001		Service Kit R	1

8.1 Navigating the Menu

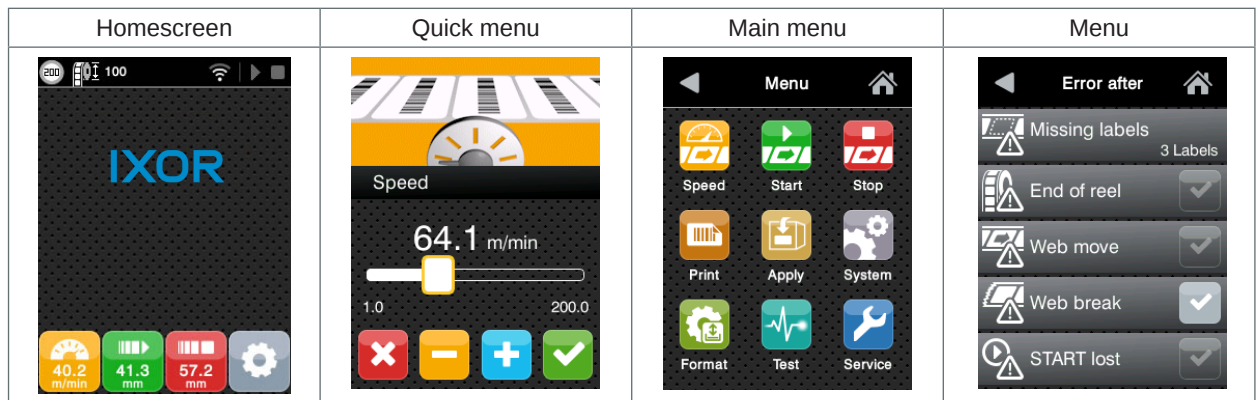


Figure 33 Menu screen

- ▶ To reach the selection screen push .
- ▶ Select the topic from the selection screen.
Different topics have substructures with further options.
The back  button caused the previous screen to appear while the home  button opens the homescreen.
- ▶ Continue with the selection until the parameter-/functions screen is reached.
- ▶ Selecting the function. Occasionally the selection will only be applied after a dialogue window.
- or -
Selecting parameters. The settings differ according to the type of parameter.

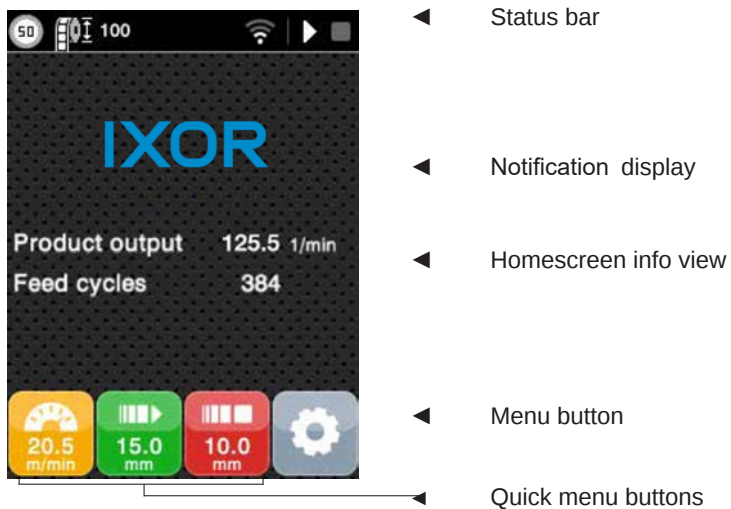


Figure 34 Homescreen

	Slider for the rough setting of the value.
	Successive reduction of the value.
	Successive increase of the value.
	Exit setting without saving.
	Exit setting with saving.
	Parameter is switched off. Activation enables it.
	Parameter is switched on. Activation disables it.

8.2 Homescreeen

8.2.1 Status Bar



- Display of the speed version
- Display of the label winder
- Display of the current diameter of the label roll
- Display of the Wi-Fi signal strength
- Display of the status of the start- and stop- signal
- Display of the currently measured feed length (label + gap)

By pushing the status bar in the homescreen important system information about the communication parameters appear.



Figure 35 Dispenser information

8.2.2 Information display

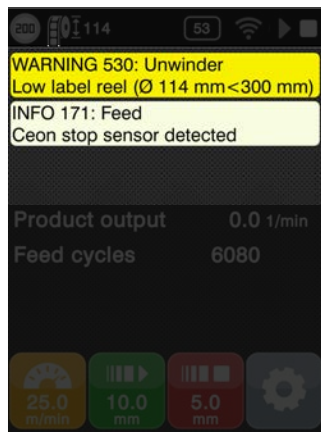


Figure 36 Information display

Notifications

- Non-critical for labeling process
- Labeling will not stop

Warnings

- Yellow
- Disappear only if condition not met anymore

Infos

- White
- Disappear after 10 seconds

8.2.3 Homescreen info view

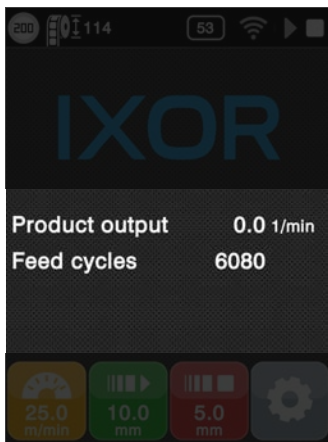


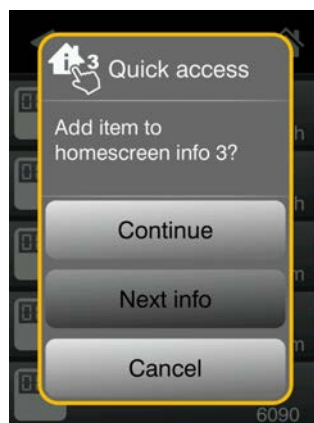
Figure 37 Info view

- Quick access to parameter values
- Usable for just displaying or changing
- Displayed parameters can be chosen by:
 - Pre-defined templates at: System > Display > Homescreen info
 - Tapping and holding on menu item (see next slide)

Add parameter to homescreen info view



Tap and hold menu item to open quick access window



>Next info< button cycles through homescreen info lines



Selected menu item appears in the homescreen info view

Figure 38 Info parameter

8.2.4 Quick Menu

Speed

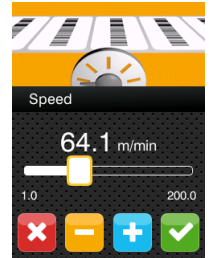


The quick menu button *Speed* opens the parameters menu to configure the transportation speed of the labeling material.

The value of the speed is set in meters per minute.

The increments are set up in 0.1m/min.

- ▶ Open the speed menu.
- ▶ Set the speed via the slider.
- ▶ Fine tune the values using  or .
- ▶ Confirm with the .



Start Delay

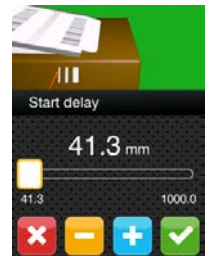


The quick menu button *Start delay* opens the parameter menu for setting up the delay of the labeling start.

The value of the delay is set in millimeters.

The increments are set in steps of 0.1 mm.

- ▶ Open the start delay menu.
- ▶ Use the slider to set the value.
- ▶ Fine tune the setting with the  or .
- ▶ Confirm with .



Stop Delay



The quick menu button *Stop delay* opens the parameter menu for setting up the delay for stopping the feed. The position to the dispensing plate can be varied with this setting.

The increments are set in 0.1 mm increments.

- ▶ Open the menu *Stop delay*.
- ▶ Set the value via the slider.
- ▶ Fine tune the setting with  and .
- ▶ Confirm with .



8.3 Menu Structure

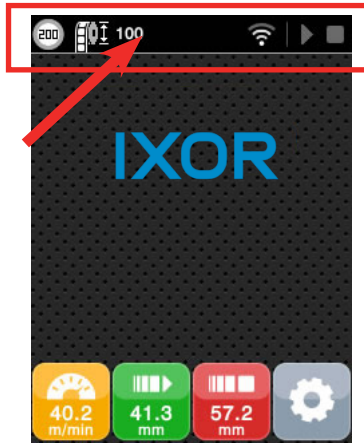
The menu enables settings of various elements to configure the labeling device to meet specific labeling needs. Furthermore test- and diagnostic- functions are available to support the configurations or to test the functionality of the labeling device.

Selection level 1	Selection level 2	Selection level 3	Selection level 4
 Speed			
 Start delay			
 Stop delay			
 System	 Speed  Start  Stop  Print  Apply  System	 Display  Presets  Error after  I/O config  Interface  Redundancy  Security  Info	 Wi-Fi  MQTT  Modbus  LAN
	 Format		
	 Test	 Simulation  I/O test  I/O report	
	 Service	 Manual  Wizards  Counters  Diagnostics	

Table 2 Menu structure

8.4 Establishing the Connection

To connect the device to the internet or a computer in a local network the IP address is necessary. The IP address as well as other system information is visible when pressing the status line in the start display of the base unit.



Status bar in the start display

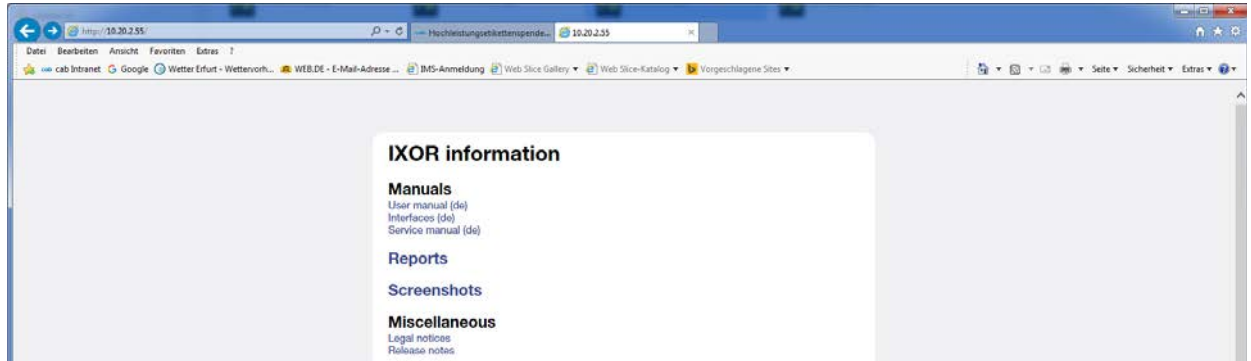


IP address in the system info.

8.4.1 Connection via a Browser

- ▶ Wireless connection to a network with internet access.
- ▶ Find the IP address in the dispenser dialog field (press the status line in the start display).
- ▶ Enter the IP address in the address bar of the web browser.

After the connection has been established the following page will be displayed:



8.4.2 Connection via FTP

- ▶ Establish a connection to the the wireless network to wich the computer of choice is connected to.
- ▶ Find the IP address of the IXOR by pressing the status bar.
- ▶ In Windows Explorer (not Internet Explorer) enter the IP address in the address bar ftp://<IXOR-IP> (e.g. FTP://10.20.2.55). An authentication dialog will open.
- ▶ Enter name: ftpadmin, password: admin.
- ▶ The folders manuals as well as reports and screenshots will be displayed.

8.4.3 Connection via VNC

VNC is a software that enables communication from the Labeling Head (server) to a computer (client) sharing the GUI of the Labeling Head with the computer and mouse and keyboard functionality with the Labeling Head.

VNC is platform interdependent and allows Windows-, iOS- or Android- users remote access to the printer provided a VNC-client is installed on the client device.

Preparing the Computer

- ▶ Install the VNC-client on the computer (client device).

Preparing the Labeling Head

- ▶ Activate the VNC server via *Settings > System > Display > VNC on*.

for Wi-Fi Access

- ▶ Activate Wi-Fi by enabling the function *Settings > System > Wi-Fi > Wi-Fi on*.
- ▶ Determine the Wi-Fi IP address.

for Ethernet Access:

- ▶ Determine Ethernet IP address.

Establishing the Connection

- ▶ Start the VNC client on the computer (client device)
- ▶ Enter the IP address of the Labeling Head in the VNC-client.
- ▶ Activate the Connection.
On the display of the client device the menu of the Labeling Head can be navigated. Using a mouse, keyboard or touch screen all the Labeling Head functions, except the sliders, can be operated remotely.

8.5 Firmware Update

There are two methods to update the firmware.

The first method downloads the firmware from the internet.

The second method creates an FTP connection to a computer on which the new firmware version has been saved.

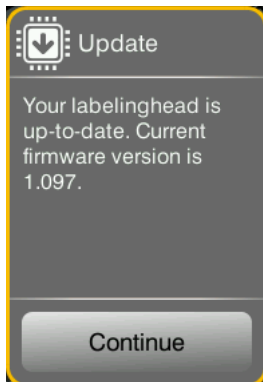
The latest [Firmware-Version](#) can be found under [cab.de](#).

8.5.1 Firmware Update via the Internet

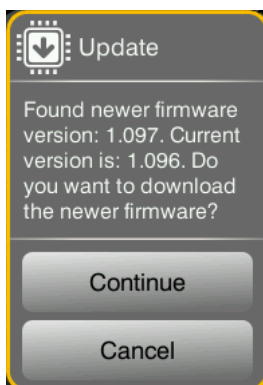
- Create a wireless connection to a network with internet access.
- Follow the menu guide:



After pushing the button **Check for update** a connection to the internet is established and the firmware status is displayed.



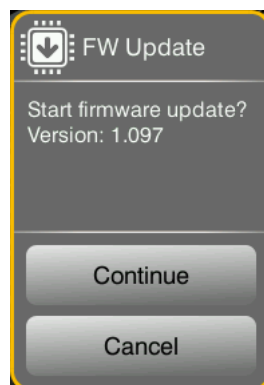
The latest firmware version has been installed, no further updates are required. Pushing **Continue** will exit this message.



A newer version of the firmware has been found.

Continue will start the update by downloading the firmware.

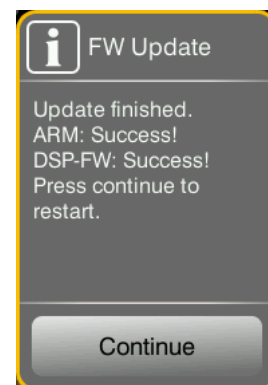
Cancel will quit the process without further action.



After the download of the firmware another confirmation query is displayed.

Continue starts the update procedure.

Cancel quits the window without further action.



Messages about the completion of the update.

Continue closes the message and restarts the device.

8.5.2 Firmware Update via FTP from a local Computer

- Establish an FTP connection between PC and IXOR.
The IXOR has to be in the same network as the computer.
- Find the IP address of the IXOR in the device info dialog (tap the status bar on the display).
- An authentication window will open.
- Enter name: ftpadmin, password: admin
- Copy the firmware from the computer to the device via drag & drop.
- After the file has been successfully copied to the device follow the dialogs visible on the IXOR display.

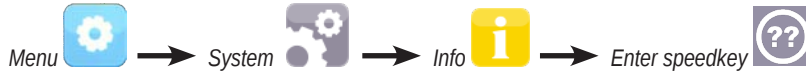
8.6 Speedkey to unlock a higher speed

To unlock a higher speed in the device it's possible to purchase a Speedkey.

Please contact the **cab** IXOR-Service . You need the serial number and the ID. The IP adress as well as other system information is visible when pressing the status line in the start display of the base unit.

The generated 12-digit code is valid only for your device and the selected speed.

- Follow the menu guide:



The labeling head IXOR is ready immediately.

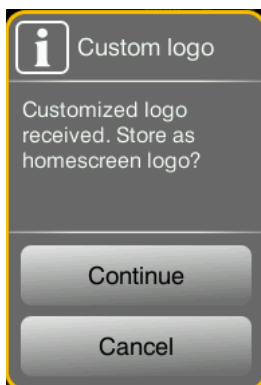
8.7 Inserting a Logo

It is possible to replace the manufacturer logo with a different one. This logo will be shown in the start display of the base unit.

The logo must be in a .PNG or .GIF format with an aspect ration of 240x120 pixels (WxH).

Transparency is permitted.

- To initiate the process a log on with the service password must be completed.
- Establish an FTP connection to the PC where the logo is saved.
- Drag the file (xxx.png) into the folder.
- Press **Continue** while the window is open.



The new logo will be displayed

If the logo is not visible the function **Custom logo** is switched off.

- Menu navigation:



- Tick the option **Custom logo** to display the custom image.

8.8 Security

8.8.1 User Types and Permissions

There are three types of accounts within a hierarchy.

- **Service** - holds maximum access right and distributes permissions to administrator and user
- **Administrator** - distributes permissions as well as limitations to the user and is standard level for factory new devices
- **User** - receives permissions from the administrator



Attention!

If the security settings are disabled the administrator is the only active account by default.

8.8.2 Activate/Reset the Password

By factory default the password protection is disabled.

- Enable the security setting:



- Password (min. 4 characters) allocated via:



- By deactivating the **Security** option the password will be reset.

8.8.3 Logging In/Out

To access safeguarded options hold the menu button  for about 3 seconds or attempt to access locked options. By submitting the password the account type is recognized and permissions acknowledged. A username is not required.

Logout is achieved by pressing the menu button  for 3 seconds or switching off the device. When the device is powered on again the **User** account is active.

8.8.4 Delegation of permissions

The delegation of permissions is set as follows:



8.8.5 Resetting the Password after loss

If the self defined password has been lost please contact cab service to receive a one time password to unlock the device.

8.9 Redundancy

To increase the system stability it is possible to run two IXOR in redundancy.

8.9.1 Requirements

Devices and cables for single ZDT system in minimal configuration.

- 2x IXOR, with respective winders
- IXOR connection
 - 2x Ethernet cable (cab: 5918665, 2.5m)
 - 1x Adapter RJ45-RJ45 (cab: 5918732)
- Product sensor
 - 1x Product sensor (eg. cab: 5918702)
 - 1x Cable product sensor (cab: 5918671, 2.5m)
 - 1x Y-Adapter (cab: 5918797)
 - 2x Cable to IXOR (cab: 5918475, 2.5m)
- Master encoder
 - 1x Master encoder (cab: 5918718)
 - 1x Y-Adapter (cab: 5918485)
 - 2x Cable to IXOR (cab: 5918475, 2.5m)

8.9.2 Connection

For redundancy you need 2 IXOR in same Ethernet network (many IXORs can be connected in same network, each IXOR can be in redundancy mode with any other in this network). So many redundant IXORs can stay in same network.

- One product sensor have to be installed for both of the IXORs. Y-adapter for product sensor is needed, cab 5918797. One Sensor (often M8 to M12 connector, then to Y-Adapter, then to each IXOR) two cables to input START of each IXOR.

- If you want to use one master encoder for both IXOR you need the Y-adapter cab 5918485 at encoder and go with two cables to input SYNC of each IXOR.

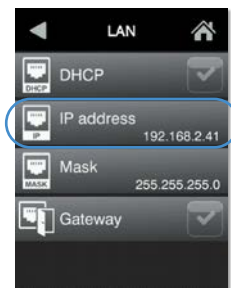
8.9.3 Configuration

Configuration, must be done step by step

- Setting up ethernet connection



- ▶ Navigate to System → Interfaces → LAN
- ▶ Set both IP addresses to the same subnet (first 3 numbers)
- ▶ Set last number to different value

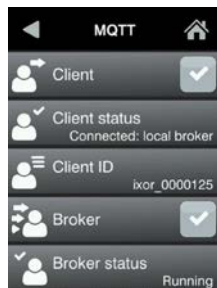




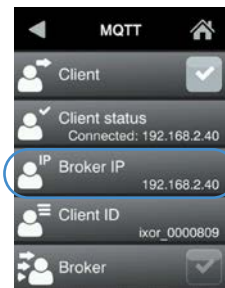
- ▶ Check for successful ethernet link
- ▶ Use device info window
- ▶ If LAN: N/A is displayed, check the IP addresses and cable connections



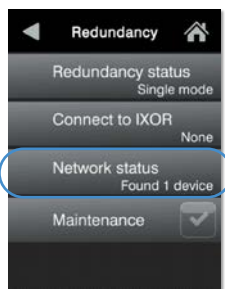
- Setting up MQTT connection



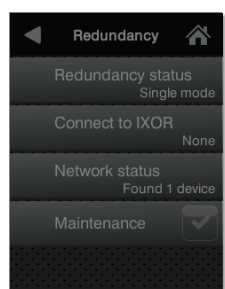
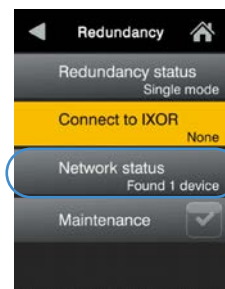
- ▶ Navigate to System → Interfaces → MQTT
- ▶ IXOR 1: enable broker and client
- ▶ IXOR 2: enable only client
- ▶ IXOR 2: enter IP address of IXOR 1 into Broker IP
- ▶ IXOR 2: after connection, client status must show „connected: IP“



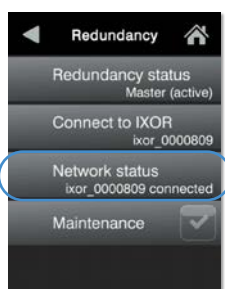
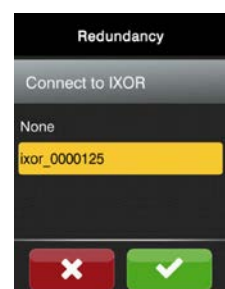
- Enabling redundancy



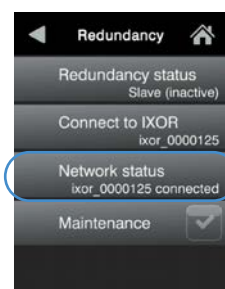
- ▶ Navigate to System → Interfaces → Redundancy
- ▶ Network status for both IXOR must show: „Found 1 device“
- ▶ Tap on „Connect to IXOR“ on either one → here shown on IXOR 2



- ▶ Select the other IXOR and tap OK



- ▶ Both IXOR will show connected status on success
- ▶ Done!



8.9.4 Usage

Since two IXOR share one product sensor, the devices will automatically decide which one is the master IXOR and which one the slave IXOR. This depends on the distance from the product sensor to dispensing beak and therefore from the start delay. The IXOR closer to the product sensor (smaller start delay) will be the master, while the IXOR more far away from the product sensor will be the slave.

The parameter “redundancy status” under System → Interfaces → Redundancy will give you information about the current status of the system.

Master	
Master (active)	The master IXOR is currently labeling incoming products.
Master (inactive)	The master IXOR is not ready and will not label products, even if the slave IXOR gets inactive. Possible reasons: • End of reel • Motor turned off
Master (armed)	The master IXOR is currently not labeling products, because the slave IXOR is active. When the slave IXOR becomes inactive, the master IXOR will be activated in a controlled manner, so all products between the two IXOR will be labeled exactly once.
Slave	
Slave (active)	The slave IXOR is currently labeling incoming products.
Slave (inactive)	The slave IXOR is not ready and will not label products, even if the master IXOR gets inactive. Possible reasons: • End of reel • Motor turned off
Slave (armed)	The slave IXOR is currently not labeling products, because the master IXOR is active. When the master IXOR becomes inactive, the slave IXOR will become active.
Slave (disengaging)	The slave IXOR was active and received a user request for maintenance or an end of reel signal. It will label the products in between master IXOR and slave IXOR and then go inactive. The master starts labeling right away and goes active

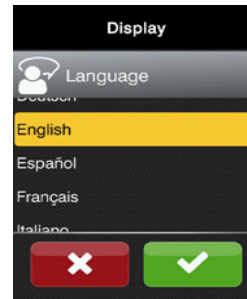
9.1 Menu

Editors

Tapping onto menu items opens the respective editor, according to the parameter type. There are several editor, the most common ones are listed here:

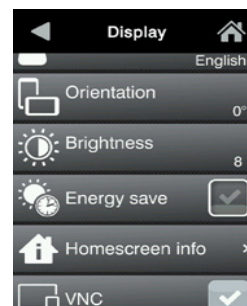
LIST EDITOR

List item values will be applied after tapping the green button



BOOLEAN EDITOR

Boolean items do not have separate editor – the value will be applied instantly.



NUMERIC EDITOR

There are several approaches for changing values in the numeric editor: using the slider, the plus and minus button and the keypad window. Tapping onto the value will open the keypad window, in which the value will be applied after tapping the green button.



9.2 Establishing a connection

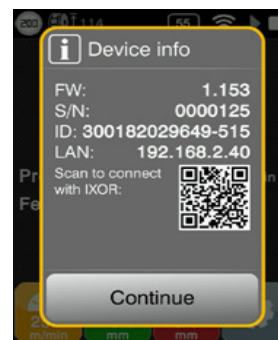
Integrated wi-fi hotspot

The integrated wi-fi module allows a direct connection between a PC/mobile device and IXOR without the need of an extra router. This can be enabled in the menu by:

System ► Interfaces ► Wi-Fi ► Operation mode = Hotspot [WLAN_Operation Mode]

The SSID and password of the hotspot are shown below in the same menu and can be changed if needed. To connect either the credentials or the QR code in the device info can be used:

The IP address of IXOR in hotspot mode is fixed and set to **192.168.10.1**



9 Software

9.3 Products and labels

9.3.1 Multi labeling

Multi labeling allows feeding multiple labels and/or feeds with a single START trigger. There exist four modes which can be set up under:

Start ► Multi label mode	[Multi Label Mode]
--------------------------	----------------------

Single

This is the standard mode, which feeds a single label for each received START signal.

Multi (equal labels)

Select the number of labels to feed (max. 15) under Multi labels. The position of each label on the product can be setup using Start delay & Start delay 2 – 15. The start delays are additive, which means to find out the actual start delay of e.g. label no. 3, the following calculation must be done:

Start delay + Start delay 2 + Start delay 3 = Actual start delay 3
for example: 50mm + 100mm + 100mm = 250mm

So, to move the whole package of labels on the product, the start delay must be adjusted. To change the position of a single label X, the respective start delay X and the next start delay X+1 must be adjusted.

The start delays 2 – 15 must always be greater than the feed length / label size!

The manual feed will only supply single labels.

Twin (different labels)

Twin label mode enables the application of two labels with different sizes. For adjusting the label placement the parameters start delay and start delay 2 are used. To position the labels on the beak, one stop delay is not sufficient, therefore two delays can be set up under:

Stop ► Stop delay	[StopDelay]
Stop ► Stop delay 2	[StopDelay2]

The manual feed will only supply single labels and will change constantly between label 1 (start delay, stop delay) and label 2 (start delay 2, stop delay 2). Turning the motor off and on will not reset the currently active label. For diagnostic purposes, both measured feed and label lengths can be found under:

Service ► Diagnostic ► Labels

Single (two feeds)

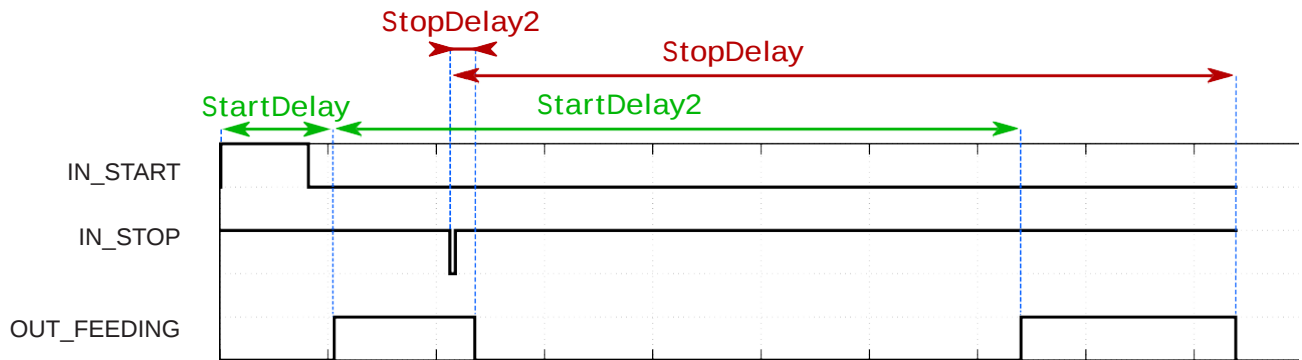
This mode allows feeding a single label with a single START signal, but divide it up into two feeds. This might be useful for around-the-corner label applications. This functionality is only available for automatic starts, supplied by the START input. Using the manual feed and the standard stop delay the label should be aligned on the dispensing beak. The standard start delay is used to adjust the label position on the product. So product and dispensing beak alignment is achieved with:

Stop ► Stop delay	[StopDelay]
Start ► Start delay	[StartDelay]

The stop delay 2 is used to control the stop position after the first feed. This value should normally be set up in a way that the label edge aligns with the end of the dispensing edge. This ensures that the next label is not pulled out by the bypassing product. The start delay 2 controls when the second feed will start and should be set in a manner that the previously labeled product is not in reach of the dispensing beak at that time. So pause and second feed are configured using:

Stop ► Stop delay 2	[StopDelay2]
Start ► Start delay 2	[StartDelay2]

The following signal graph illustrates the behaviour for one automatic start, with the two feeds being shown by the OUT_FEEDING signal.



Note that the second feed is internally processed as a second label. So setting the start delay 2 too small, will result in the second feed not being processed. The exact correlation is as follows:

$\text{StartDelay} + \text{StartDelay2} > \text{FeedLength} - (\text{StopDelay} - \text{StopDelay2})$ Also note that the stop delay must always be greater than the stop delay 2:

$\text{StopDelay} > \text{StopDelay2}$

9.3.2 Missing labels

Missing labels on the web can be handled by the IXOR out of the box. The configuration depends on the position of the label sensor in regard to the dispensing beak and the desired action when a missing label was detected.

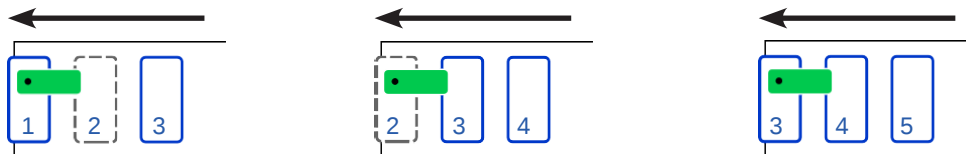


Note!

The missing label feature is only active on automatic starts, which are triggered by the START input. Additionally the labels must be correctly measured beforehand by using the manual feed. The currently calculated feed length is always displayed in the status bar on the homescreen.

SENSOR ON THE FIRST LABEL

The three pictures below show a desired feeding progression, where the label sensor (green), labels on the web (blue), missing labels (grey) and the dispensing beak (black) are illustrated.



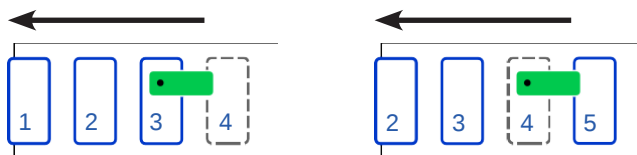
In the first picture label 1 is fed normally. Since label 2 is missing the labelinghead will not stop in the second picture, but will feed through and stop on label 3. This is desired, because now the next product can be served correctly. The menu configuration for this case is very simple:

Stop ► Stop if no label = Off

[StopIfNoLabel]

SENSOR NOT ON THE FIRST LABEL

If the sensor is not positioned on the first label, the IXOR needs to make sure that no double labels are applied and that the gap on the label web is fed out correctly, so that every product can be served. The pictures below are illustrating this problem.



In the first picture above a START is received and label 1 is fed. But, as label no. 4 is missing, the feed will not be stopped with the default configuration and Label 2 would be applied on the product together with label

1. To overcome this problem the following parameters need to be set:

Stop ► Stop if no label = On	[StopIfNoLabel]
Stop ► Disp(ensing) edge of sensor	[StopSensorPos]
Stop ► Position of NOLABEL = at disp. edge + FEED	[NOLABELPos]

With this configuration the labelinghead will stop after Feed length, even if no STOP trigger was received. The knowledge of the distance from Dispensing edge to sensor makes it possible to trace the missing label until it reaches the dispensing edge. When Position of NOLABEL is configured as 'at disp. edge + FEED', any missing label reaching the dispensing beak will be automatically ejected by a manual feed with the set up digital Speed. This makes sure that a label is always ready at the dispensing beak.

ACTION ON DETECTION OF MISSING LABEL(S)

There are several actions which can be used to inform the operators and/or superior machine control about missing label(s). These can be set up in the menu under:

Stop ► Position of NOLABEL	[NOLABELPos]
System ► Error after ► Missing labels	[ErrorAfterNoLabels]

The parameter Position of NOLABEL controls the moment the digital output NOLABEL will be activated and also triggers an error or a feed. Setting Error after Missing labels to zero will never trigger an error after missing labels. Any other value X will cause the labelinghead to go into error state issuing the error 101 after X subsequent missing labels.

TROUBLESHOOTING

Many labeling problems like misplaced or double labels on the product are results of a wrongly configured missing labels feature. There are some diagnostic parameters that are very helpful for troubleshooting:

Service ► Counters ► Missing labels	[CMissingLabels]
Service ► Diagnostics ► Labels ► Feed length	[FeedLength1]
Service ► Diagnostics ► Labels ► Last Feed length	[FeedLengthLast]
Service ► Diagnostics ► Labels ► STOP signals	[CStopCount]

The endless counter for Missing labels will increment each time a label is missing on the web. The Feed length parameter shows the currently measured sum of label + gap and is averaged over the last 10 labels. To find out the exact length of the last feed, regardless if it was finished because of a STOP trigger or not, Last feed length is used. The STOP signals counter is reset on each reboot and incremented on a rising or falling edge, depending on what is configured as Stop condition.

9.3.3 Dead time compensation

The electronics of product (START) and label (STOP) sensors have a fixed response time between detection and signalling. Usually this dead time is much greater than the dynamic jitter. IXOR can compensate these dead times of sensors to ensure that varying product speeds do not cause a changing label position on product and beak. The parameters can be found under:

Speed ► Start compensation	[StartCompTime]
Speed ► Stop compensation	[StopCompTime]

For the CEON label sensor a stop compensation of 200µs is recommended. The general rule of thumb is as follows:

- start compensation increased
 - label is applied earlier for higher speeds
 - label position on product moves against product direction
- stop compensation increased
 - label is stopped earlier for higher speeds
 - label moves away from dispensing edge against label direction

The following parameters can tackle these issues:

Both start and stop inhibit function will discard any triggers for the given inhibit distance after the first trigger. The set up start and stop condition defines the edge used as trigger. Note that inhibit will always be active, regardless of the feed source being automatic start or manual feed. Turning the motor off and on will not reset the stop and start inhibit logic. After rebooting the first trigger will be accepted again, regardless of the conditions before reboot.

9.3.4 Start & stop inhibit

This feature aids the application of special labels and handles noise from sensors. There are several reasons for multiple START/STOP signals from the product/label sensor:

- Products with reflective surfaces like jewel cases
- Labels with gaps inside and/or metallic prints
- Any dirt on products / labels causing noise

The following parameters can tackle these issues:

Start ► Start inhibit	[SartInhibit]
Start ► Start inhibit distance	[SartInhibitDist]
Stop ► Stop inhibit	[StopInhibit]
Stop ► Stop inhibit distance	[StopInhibitDist]

Both start and stop inhibit function will discard any triggers for the given inhibit distance after the first trigger. The set up start and stop condition defines the edge used as trigger. Note that inhibit will always be active, regardless of the feed source being automatic start or manual feed. Turning the motor off and on will not reset the stop and start inhibit logic. After rebooting the first trigger will be accepted again, regardless of the conditions before reboot.

9.3.5 Start & stop condition

The start and stop conditions determine when an automatic start / feeding stop is triggered. The start condition is applied to the digital input START, the stop condition to the digital input STOP. This feature can be set up in the menu under:

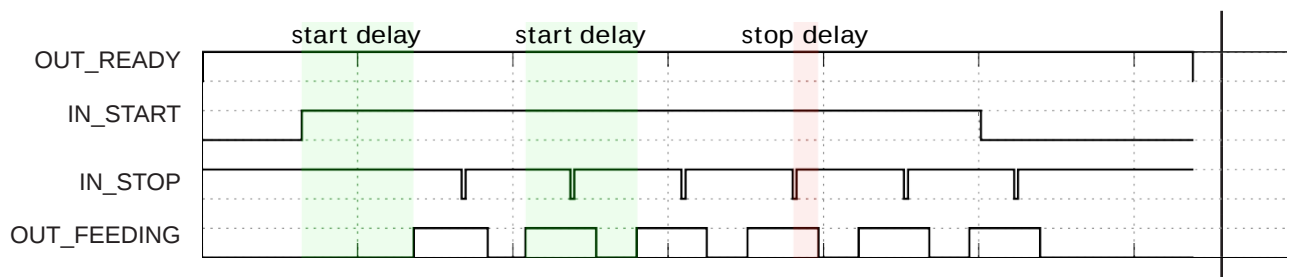
For both conditions a trigger is detected when, on rising edge the signal changes from 0 to 1, while on falling edge it changes from 1 to 0. The stop condition can be set to automatic, for which the labelinghead itself determines which edge is used, depending on the stop delay value. For manual workstations the start condition continuous, when HIGH might be useful. This will trigger a new START directly after a finished feed, when the START input is HIGH.

9.3.6 Endless labeling, with fixed distance

To apply labels in a fixed distance to each other on a product – the usual case being an endless web – the endless labeling mode can be used. When the START input is HIGH, labels are dispensed in a distance given by start delay. To enable the endless labeling mode set:

Start ► Start delay control = Endless	[SartDelayControl]
---------------------------------------	--------------------

Make sure to leave the other parameter in start menu on default, that no overlaps between the functions occur. The following signal graph illustrates the behaviour of this function:



9.3.7 Label reel monitoring

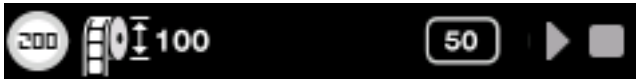
Label reel monitoring and diameter measuring is supported in the standard firmware for both mechanical and motorized winders. The mechanical rewinder is the only device whose material diameter cannot be determined. The mechanical unwinder will supply its measurement values through the 5-pin cable attached to END/DIM, while the motorized winders use the PowerBus on the power cable to transport this information.

Status of diameter measurement

The labelinghead will conduct a very precise measurement of the label reel diameter using the integrated sensors in the winders. It will take about 3-5 full rotations of the winder discs together with label transport through the drive roller to calculate a rough value for the diameter. The diameter will get more and more precise over time. Opening the clamp roller and/or changing the label material will reset the measurement soon after the first labels were fed again.

HOMESCREEN

In the homescreen status bar on the left side there's an icon shown followed by the actual diameter of the active unwinder in mm. The icon holds a lot of status information, which is described in the following:

	- no icon or diameter displayed - no winder was rotating or detected yet
	- icon is displayed in light grey - diameter is not displayed - a winder was detected, but the diameter cannot be calculated yet, because the number of rotations was too small - accuracy = invalid
	- icon is displayed in light grey - diameter is displayed in light grey - an approximation of the diameter was possible - accuracy = coarse
	- icon is displayed in white - diameter is displayed in white - label reel diameter calculation is precise now - accuracy = accurate
	inside wound label reel was detected, this is reflected by the icon

MENU

Most of the status data which is shown on the homescreen can also be found in the menu:

Service ▶ Diagnostics ▶ Miscellaneous ▶ Active unwinder	[ActiveUnwinder]
Service ▶ Diagnostics ▶ Miscellaneous ▶ Unwinder edges	[EndDimEdgeCount]
Service ▶ Diagnostics ▶ Miscellaneous ▶ Unwinder1 edges	[Unwinder1EdgeCount]
Service ▶ Diagnostics ▶ Miscellaneous ▶ Unwinder2 edges	[Unwinder1EdgeCount]
Service ▶ Diagnostics ▶ Miscellaneous ▶ Rewinder edges	[RewinderEdgeCount]
Service ▶ Diagnostics ▶ Miscellaneous ▶ Rewinder diameter	[UnwinderEdgeReelDiam]

The parameter Active unwinder shows the currently active unwinder or 'None' if no unwinder was detected. Rewinder diameter shows the currently measured diameter of the rewinder, which is not displayed anywhere else in the menu. The 4 different values for edges display the internal counts of the sensors in the respective winders:

PARAMETER	ASSOCIATED WINDER	1 ROTATION
Unwinder edges	Mechanical unwinder	8 edges
Unwinder1 edges	motorized unwinder 1	22 edges
Unwinder2 edges	motorized unwinder 2	22 edges
Rewinder	motorized rewinder	22 edges

Digital inputs and outputs

There are several digital I/Os related to the label reel monitoring:

DIR.	I/O	CONNECTOR	DESCRIPTION
Input	END_IN	Pin4 on END / DIM	Connection of a sensor which detects an end-of-reel Error state of IXOR will be triggered on rising edge
	DIM_IN	Pin2 on END / DIM	Connection of a sensor which detects a diminishing reel IXOR will be in warning state if signal is HIGH
	END_DIM	Pin5 on END / DIM	Only used for mechanical unwinder
Output	END	Pin12 on I/O	Connection of superior machine control to react on end-of-reel HIGH, when: END_IN == HIGH HIGH, when: end-of-reel was detected
	DIM	Pin11 on I/O	Connection of superior machine control to react on diminishing reel HIGH, when: DIM_IN == HIGH HIGH, when: actual measured diameter of unwinder is smaller than DIM diameter

Diminishing reel warning & end-of-reel error

The warnings and errors are useful for standalone mode of the labeling head and can be completely turned off if a superior control is controlling and monitoring. The detection of end-of-reel and diminishing reel, as well as the diameter measurement, will be active regardless.

The parameters for controlling the warnings and errors of unwinder label reel monitoring can be configured in the menu under:

System ► Presets ► DIM diameter	[DIMDiameter]
System ► Error after ► End of reel	[ErrorAfterEND]

Warning 530 [LowLabelReel] will be displayed, if the diameter accuracy is either coarse or accurate and the measured value is below DIM diameter. This will also cause the digital output DIM to be set to HIGH.

Set the parameter End of reel to 'Immediately' or 'Delayed' to trigger error 501 [EndOfReel] when end-of-reel was detected. Regardless of the setting of End of reel, the digital output END will be set to HIGH. Note that end of reel can only be detected if the accuracy of the diameter measurement has reached accurate.

The END output will be reset to LOW depending on the End of reel setting:

- 'No error': END will be set to LOW as soon as diameter accuracy has changed from invalid to coarse
- 'Immediately', 'Delayed': END will be set to LOW as soon as the error is reset

Rewinder full detection

The rewinder full detection logic is a more simple logic, which will trigger error 111 [RewinderFull] once a configured threshold is reached. No outputs will be set. The threshold can be set in the menu under:

System ► Error after ► Morized rew. full	[RewinderErrorAfterDiam]
--	--------------------------

The parameter Rewinder diameter will be '0mm', if the accuracy is invalid. After the error 111 [RewinderFull] was reset, the measurement logic will also be reset after some feeds.

Resetting the logic – END is 'stuck'

The diameter measurement will be preserved during power-offs/reboots. This feature enables maximum reliability for end-of-reel detection since the initial phase of the diameter logic is only needed to be done once per label roll.

However, this can result in seemingly counter-intuitive behaviour, especially if the end-of-reel state (END = HIGH) will remain through reboots. To tackle this, there are two progressions to reset the logic, which works for both unwinders and rewinders.

RESET BY ILLOGICAL BEHAVIOUR

The diameter logic will detect illogical behaviour and reset itself after a while. The accuracy needs to be monitored by using the icon in the homescreen for unwinders (see section 5.7.1) or in the menu for rewinders (see section 5.7.4). To force illogical behaviour do the following:

- open the clamp roller and trigger some manual feeds
- on mechanical unwinders, loose the break by moving the pendulum down and then rotate the disc back and forth – you should see the value of Unwinder edges increase
- on motorized winders, if possible remove the reel temporarily and move the pendulum down, so that the values of Unwinder1 edges, Unwinder2 edges or Rewinder edges increase
- while performing these actions, monitor the accuracy of the logic
- once the accuracy changes to invalid, reinsert the labels and/or roll, close the clamp roller and feed out labels until the accuracy changes to coarse or accurate again

RESET BY ENABLING ERROR AFTER END OF REEL

If the digital output END seems to be stuck and error after end of reel is set to 'No error', it might be helpful to temporarily enable the end of reel error and to trigger it by hand. To do so follow these steps:

- change error after end of reel to 'Immediately'
- insert labels correctly into the winder and drive roller
- feed labels manually until the accuracy reaches the accurate state
- open the clamp roller and feed labels until the end of reel error 501 [EndOfReel] appears
- reset the error – now the output END should be cleared
- change error after end of reel back to 'No error'

Multiple unwinders

The label reel monitoring is capable of handling multiple unwinders. Determining which unwinder is currently active, is achieved by monitoring the rotation / edges of all unwinders. In dual/multiple unwinder operation make sure to keep inactive winders from rotating. To check which unwinder is currently active, visit the menu under:

Service ► Diagnostics ► Miscellaneous ► Active unwinder

[ActiveUnwinder]

9.4 Printers

The labelinghead provides two different approaches to control printers: a generic way using digital I/Os and a proprietary way to control the cab PX Q direct print module over Ethernet.

9.4.1 Printer control using digital I/Os

The generic printer control needs to be enabled in the menu by setting:

Print ► Printer ► PRT control

[PrinterOn]

There exists two modes: print in stop and print in motion, which can be selected in the menu under:

Print ► Printer ► Print condition

[PrintCondition]

The following digital I/Os are used to control a generic printer:

I/O	CONNECTOR	PROPERTIES	DESCRIPTION
PRT	Pin11 on APPLY	Active high output	Changes to active to start a connected printer
	Pin4 on PRINT		
PRT_BUSY	Pin12 on APPLY	Configurable active high/low input	Indicates printer busy / printer not ready
	Pin5 on PRINT		

Print in stop is usually used for hot stamping, while print in motion is used for ink-jet printing.

Print in stop

Print in stop is a time controlled function, which will be triggered after a feed has been finished with a detected label. This means that a rising/falling edge on the STOP input has been received while feeding. If not, the clamp roller open info will appear [ClampRollerOpen] and the PRT output will not be triggered. The logic is configured using the following menu items:

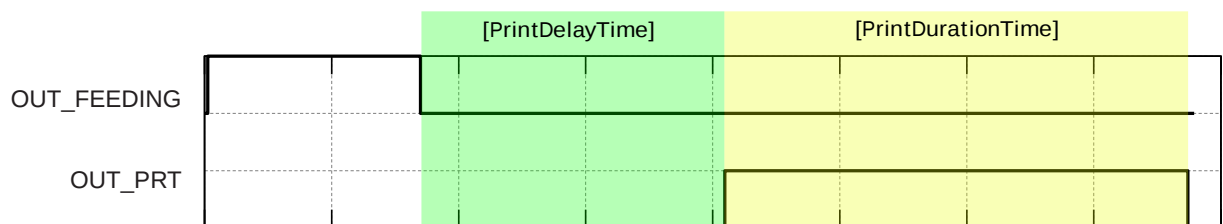
Print ► Print delay

[PrintDelayTime]

Print ► Print time

[PrintDurationTime]

The parameter Print delay defines the duration between the FEEDING output going low and the PRT output going active/high. The hold duration until PRT goes inactive/low again is configured by Print time. The following graph is illustrating this behavior:



Print in motion

Print in motion is a distance controlled function,

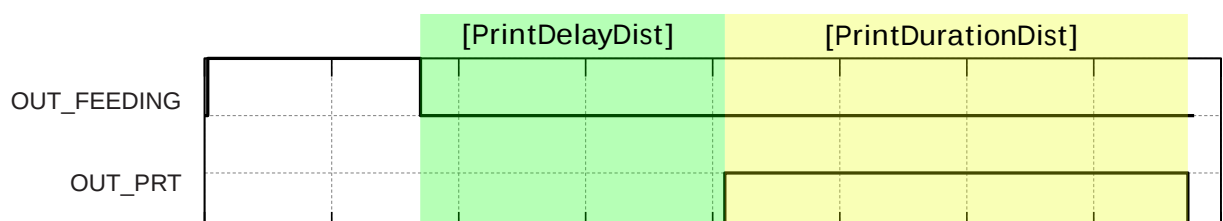
Print ► Print delay

[PrintDelayDist]

Print ► Print distance

[PrintDuration]

The parameter Print delay defines the distance between the FEEDING output going high and the PRT output going active/high. The hold duration until PRT goes inactive/low again is configured by Print distance. The following graph is illustrating this behavior:



Printer status and error handling

The PRT_BUSY input is used to determine the printer status and react accordingly to it. To differentiate between interpreting the input as printer is busy (high-active) and printer is ready (low-active) use the following parameter:

Print ► Invert PRT_BUSY	[PrtBusyLowActive]
-------------------------	--------------------

Some printers will indicate a busy state when new jobs are loaded, while still being able to print. To avoid falsely triggered error messages, a duration for the PRT_BUSY input can be set, which defines after which time an electrically active signal on the input will logically be interpreted as active:

System ► Error after ► PRT_BUSY	[ErrorAfterPrtBusy]
---------------------------------	---------------------

According to the situation there exist several error messages, which are listed as follows:

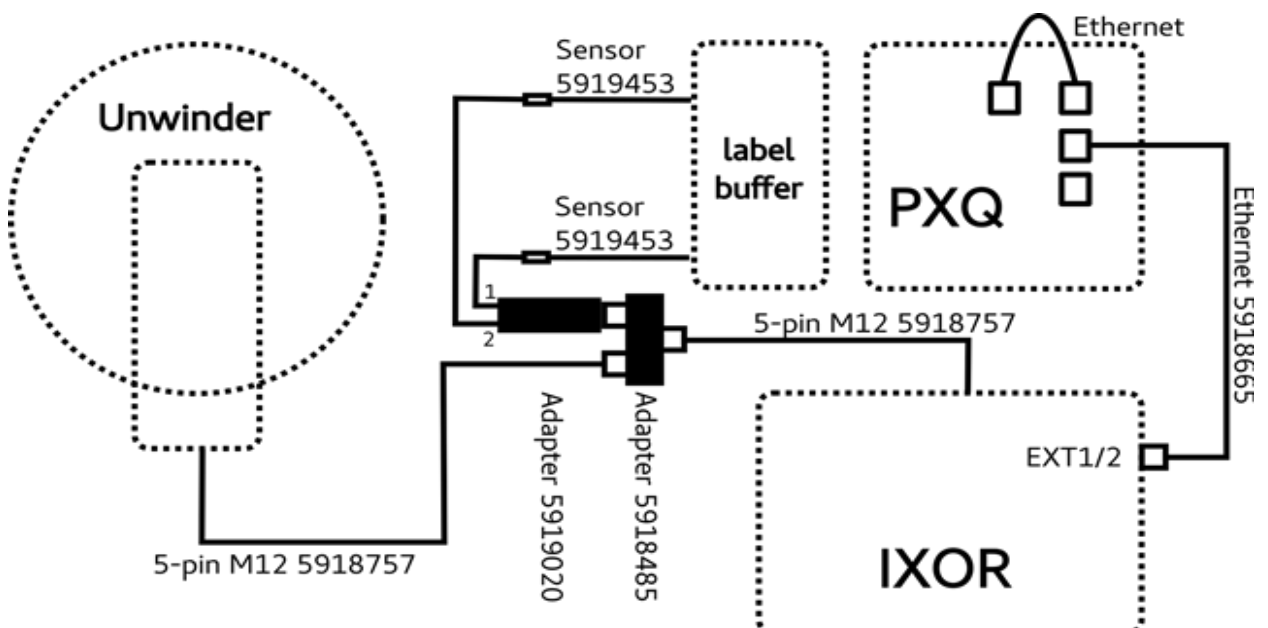
ID	Title	Description
201	PrtBusyForTooLong	The PRT_BUSY input indicates that the printer is currently printing. When the PRT output control was activated and PRT_BUSY is held HIGH for more than 3 seconds, it is assumed that the printer has an error.
202	PrtBusyOnFeed	The PRT_BUSY input indicates that the printer is currently printing. When a print in stop is in progress, any feed requests will be aborted, to ensure the print will not be disturbed.
260	PrtBusyButtonFeed	A manual feed is not possible since an active PRT_BUSY input indicates that the printer is currently printing and not ready.
261	PrtInStopActive	A feed request (manual feed or automatic start) was received and is about to be executed, but printing is still in progress (PRT output is HIGH)

9.4.2 cab PXQ

The IXOR can be bundled up with a cab PXQ direct print module to create a print and apply solution.

Connection Diagram

This section describes how to connect the IXOR labelinghead with the PX Q direct print module and the label buffer. IXOR and PX Q are communicating through ethernet, in particular by use of OPC UA. Make sure the ethernet patch cable on the back of the PX Q is attached. The sensors of the label buffer are directly connected to the IXOR. The unwinder must also be connected to the IXOR to ensure the label reel diameter measurement is working. See the following connection diagram for better understanding. The numbers in the diagram are the cab part numbers of the depicted parts.



Menu + network configuration

The IXOR will communicate with the PX Q using the OPC UA protocol, which is TCP/IP based. It is recommended to use a cabled Ethernet connection for maximum reliability. On the PX Q side the OPC UA server must be enabled. The IXOR does not need an enabled OPC UA server.

Both IXOR and PX Q can be integrated into an existing IP-based network. If you have a DHCP server running, please make sure that the PX Q will be assigned a constant IP address. The IXOR can have a dynamic IP address, but must be in the same subnet as the PX Q. Otherwise the IXOR will not be able to connect to the PX Q automatically.

The PX Q needs to have a job ready for the whole PIXOR system to work.

PX Q

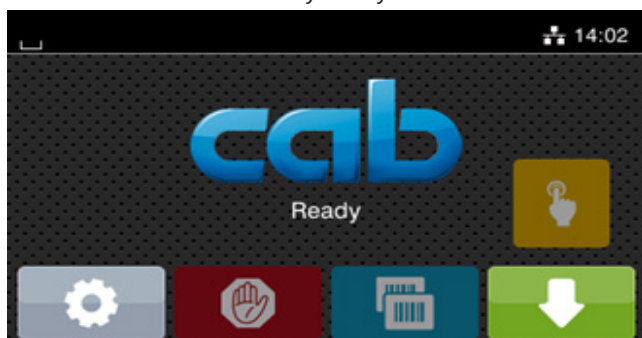
The network connection settings depend on your personal network architecture. If you are using the PIXOR in the directly connected manner the following settings need to be set up in the PX Q menu:

Menu ▶ Setup ▶ Interfaces ▶ Ethernet ▶ DHCP = OFF
Menu ▶ Setup ▶ Interfaces ▶ Ethernet ▶ IP address = 192 . 168 . 2 . 41

The next settings need to be entered in the PX Q menu, regardless of your network architecture:

Menu ▶ Setup ▶ Interfaces ▶ Network services ▶ OPC UA = ON
Menu ▶ Setup ▶ Printing ▶ Print on demand = OFF

The print on demand feature may also be enabled by your printing application (e.g. cablabel) or explicitly for each label. This will result in the appearance of a yellow button on the homescreen and should be avoided. Otherwise the PIXOR will not work correctly. The yellow button looks as in this screenshot:



IXOR

The network connection settings depend on your personal network architecture. If you are using the PIXOR in the directly connected manner the following settings need to be set up in the IXOR menu:

Menu ▶ Setup ▶ Interfaces ▶ LAN ▶ DHCP = OFF	[EthernetDhcp]
Menu ▶ Setup ▶ Interfaces ▶ LAN ▶ IP address = 192.168.2.40	[EthernetIp]

The next settings need to be entered in the IXOR menu, regardless of your network architecture:

Menu ▶ Print ▶ Printer ▶ cab PXQ	[PrinterOn]
Menu ▶ Print ▶ PXQ IP ▶ <IP address of the PXQ in your network>	[PxIp]

To find out if your connection was successful and/or if there are any errors please check the next sections of this document.

Status monitoring

There are several status monitoring possibilities for both IXOR and PXQ, which are described in this section.

SENSOR STATUS / LOOP FILL LEVEL

When the buffer is fully filled with labels and the deflection roller is at the top stop, the END_IN input of the IXOR must be HIGH. If the deflection roller is at the lower end of the buffer, the DIM_IN must be HIGH. The input and output can be monitored in the menu under

Menu ► Service ► I/O-Test

The corresponding screen for a full buffer should be similar to the following screenshot:



Moreover the loop fill level in the menu under

Menu ► Print ► Loop fill level

[LoopFillLevel]

Will display the abstract status of the buffer according to the input DIM_IN and END_IN. The mapping is as follows:

DIM_IN	END_IN	LOOP FILE LEVEL
0	1	1 – Full / 100%
1	1	3 – Almost full / 67%
1	0	2 – Almost empty / 33%
0	0	0 – Empty / 0%

PX Q STATUS

The IXOR will constantly keep track of the current status of the PX Q. The resulting parameter can be found in the menu under

Menu ► Print ► PXQ status

[PxStatus]

The different values include multiple information about the connection and PX Q status. These are listed in the following table:

PXQ STATUS	DESCRIPTION
00 – Not connected	None of the other status values are applicable.
01 – Connection error	The ethernet connection cannot be established. This might be a problem with the physical interface or wrong IP address settings.
02 – Ready	The connection is established and the PX Q has a job loaded.
03 – Not ready	The connection is established, but the PX Q is not ready or has not job loaded.
04 – Error	The connection is established, but the PX Q is in error.

ERRORS

Several errors can be triggered by IXOR in combination with PX Q usage. A comprehensive list can be found on the device or here: https://www.cab.de/ftp/media/firmware/ixor/doc/messages_en.pdf. The next table shows the most common error messages for the PIXOR:

ERROR ID	DESCRIPTION
202	An automatic start (product sensor) was about to be executed, but the buffer did not hold enough labels.
203	IXOR is ready, but the PX Q changed its status from ready to something else.
260	A manual feed on the IXOR was requested, but the label buffer did not hold enough labels.

Tweaking for long labels and bursts of labels

When using long labels, printing in the standard buffer level range (0% - 67%) may results in 'overfilling' the buffer and therefore creating a loose loop. To overcome this for feed lengths greater than 100mm the buffer fill level range for which printing is enabled can be decreased. This can be configured using the following parameter:

Menu ► Print ► Buffer print range	[BufferPrintRange]
-----------------------------------	--------------------

Whereas the different list options are explained here:

BUFFER PRINT RANGE	DESCRIPTION
00 – Standard (0% - 67%)	Standard print range is used, the buffer is be filled to the maximum point. Use for feed lengths < 100mm
01 – 0% - 33%	Decreased buffer print range, use for feed lengths > 100mm
02 – Automatic (label size)	The buffer print range is set internally to either 0% - 67% or 0% - 33% depending on the currently measured feed length. For feed lengths > 100mm the range 0% - 33% is used. Otherwise 0% - 67%.

When bursts of labels are needed and the buffer is depleted quickly, it sometimes is helpful to directly print on each feed. This gives a head start for the printer to refill the buffer. To enable this features navigate to:

Menu ► Print ► Print on feed	[PrintOnFeed]
------------------------------	---------------



Attention!

When inserting labels with this feature enabled, it is not possible to remove a loose loop (overfilled buffer). Either the print job is temporarily deleted until the buffer is at its working fill level or the endless feed feature is used. To enable this, first turn off the IXOR using the power button. Then hold the power button until the IXOR starts moving at 5m/min. Release the button to stop the movement.

9.5 Simple applicators

The IXOR can control three types of simple applicators using its built-in I/O interface. For more complex progressions the I/O-box and the feed&apply logic should be used.

9.5.1 Pivot beak

A pivot beak is usually used when the products cannot be reached with a rigid beak and/or would lead to collisions between beak and product. The I/Os used for this function are as follows:

CONNECTOR	PIN	NAME	DIR	DESCRIPTION
APPLY	7	APPLY	OUT	Controls the movement of the pivot beak. The output is high active: HIGH ... Pivot beak in working position LOW ... Pivot beak in home position
PRINT	2	APPLY	OUT	Same function: short circuited with the other APPLY pin.

After enabling the pivot beak by

Apply ► Application type = Pivot break

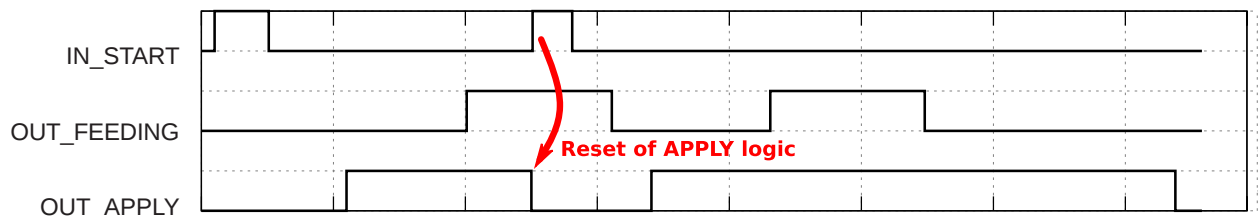
[ApplicationType]

there are four modes for controlling the movement of the pivot beak: always on, label related, product related and roller control. These modes are described in the next sections and can be configured in the menu using:

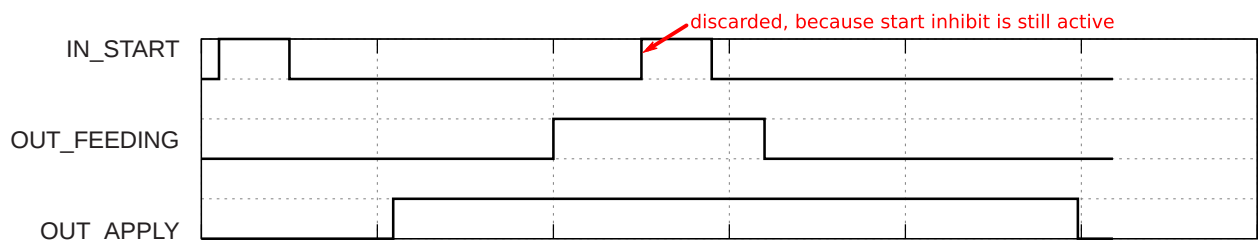
Apply ► Apply mode

[ApplyMode]

Note that the start requests for feeds are queued, while the requests for the beak control are not. When a request is received, while the last progression for the APPLY output is not finished, it will abort and restart as illustrated in the next graph.



The beak control works together with the start inhibit function, meaning it will only react on accepted start signals, as shown in the following graph.



Always on

In this mode the APPLY output will directly follow the READY output. There are no configurable delays or hold times.

Label related

In this mode the rising edge of the APPLY output will be aligned relatively to the FEEDING output. The distance can be configured using:

Apply ► Start delay

[ApplyLabelStartDelay]

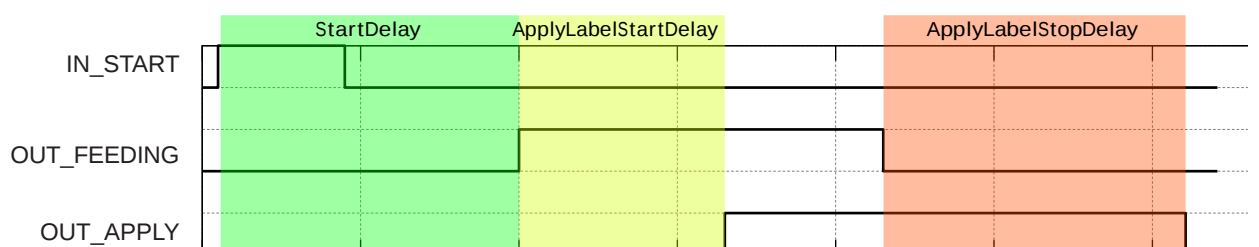
To activate the APPLY output before the FEEDING edge, this parameter can be set to a negative value, whose limit is the negative start delay.

The falling edge of the APPLY output will also be aligned relatively to the FEEDING output. The distance can be configured using:

Apply ► Stop delay

[ApplyLabelStopDelay]

To activate the APPLY output before the FEEDING edge, this parameter can be set to a negative value, whose limit is the negative stop delay. The following signal graphs illustrates the behavior.



Product related

In this mode the APPLY output will follow the active edge of the START input configured under:

Start ► Start condition

[StartCondition]

The distance until the APPLY output becomes HIGH, after a START was recognized, is controlled by:

Apply ► Start delay

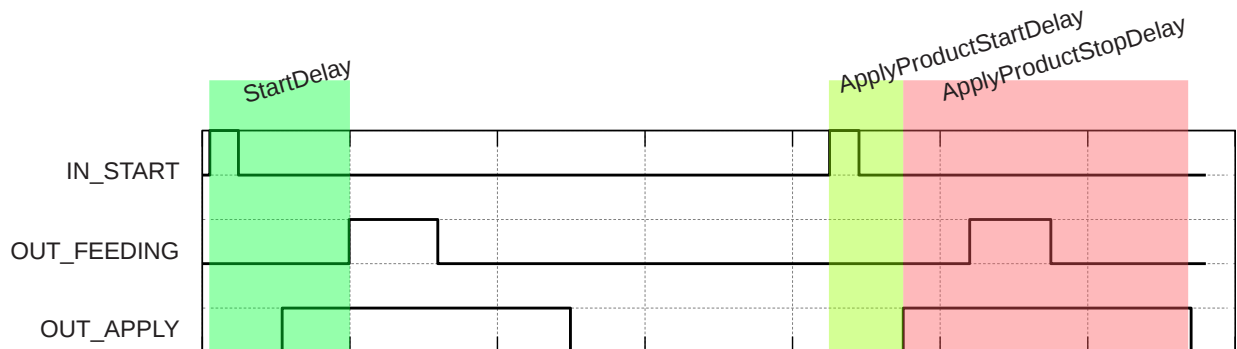
[ApplyProductStartDelay]

The distance the APPLY output will stay HIGH for is controlled by:

Apply ► Hold distance

[ApplyProductStopDelay]

This behaviour is illustrated in the following signal graph, whereas the start condition is set to rising edge.



Roller control

This mode is used for the roller control with a solenoid valve. The logic is inverted here, meaning APPLY = HIGH will lift the roller, while on APPLY = LOW the roller will be moved towards the product. Moreover when the servo motor is turned off and READY = LOW, the APPLY output will go HIGH, to make sure no bypassing products will collide with the roller. To facilitate the insertion of new label material, the APPLY output will go HIGH and stay HIGH, when a manual feed is executed.

This mode is triggered by the START signal since the behavior of the roller is product related. There are four parameters to control this mode:

Apply ► Start delay

[ApplyRollerStartDelay]

Apply ► Hold distance 1

[ApplyRollerHoldDistance1]

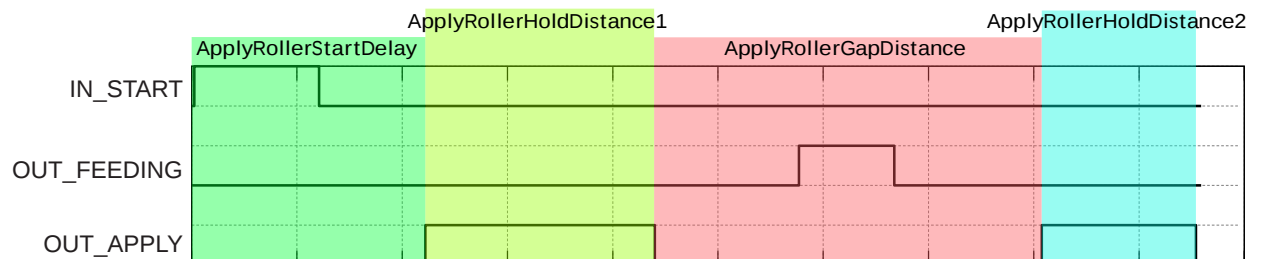
Apply ► Gap distance

[ApplyRollerGapDistance]

Apply ► Hold distance 2

[ApplyRollerHoldDistance2]

The following signal diagram illustrates the behavior of this mode:



9.6 Service and diagnostics

There are several possibilities for servicing and diagnosing the IXOR. For general performance tests the simulation function is helpful. The function of the digital I/Os and attached peripherals can be checked using the I/O-test. With additional hardware the I/Os can be self tested. Several different wizards guide through S/N changes and service notification clearing. For deeper analysis various counters and other measurement tools are available.

9.6.1 Simulation

There exist two approaches when simulating with the IXOR: with or without label material inserted. For an initial evaluation simulating without labels gives information about possible label/product output. Later on when label material is available, the simulation with labels is used to check the behaviour of the mechanical parts like winders and pendulums, as well as the durability of the label material (web breaks).

To select the desired mode navigate to

Service ► Simulation ► Simulation mode	[SimulationMode]
--	------------------

The desired target output or simulation clock rate can be configured for both modes under

Service ► Simulation ► Simulat. clock rate	[SimClockRate]
--	----------------

If the desired output cannot be reached, IXOR will produce the highest output possible with the current settings.

To start the simulation turn on the motor and enable the following parameter:

Service ► Simulation ► Clocking	[ClockingEnable]
---------------------------------	------------------

To stop the simulation either turn off the clocking parameter or turn off the motor, but be aware that clocking will resume as soon the motor is turned on again.

The current label output will be shown under

Service ► Simulation ► Label output	[OutputLabel]
-------------------------------------	---------------

If simulation mode = without labels is selected, the feed length for each simulated feed must be entered under

Service ► Simulation ► Simulation feed length	[SimFeedLength]
---	-----------------

For the other mode this is not necessary, since the feed length is defined by the inserted label material.

9.6.2 I/O-test

The I/O-test menu can be used for checking the state of the integrated digital I/Os, as well as manipulating both inputs and outputs. To open the menu navigate to

Service ► I/O - Test

The menu consists of two columns, where the left one shows all inputs, the right one all outputs. The LED on the left side of each I/Os shows the current state. Tapping on an I/O will show a warning which needs to be confirmed. After that, tapping on an I/O will create a short pulse and holding on an I/O will open the force menu.

Forcing allows both inputs and outputs to be manipulated by the user. Forcing outputs will change the actual electrical signal level on the output, while for inputs only the internal functional level is changed.

Forced I/Os are marked with a red background behind the LED. When I/Os are manipulated using an interface like ModBus TCP or MQTT, they will be displayed in forced state, to distinguish from their electrical or functional state.

The screenshot to the right, shows a forced-to-low FEED input, an detected electrical high level on the START input and an electrical high READY output. The force menu for the READY output is opened and the various options are shown.



9.6.3 Wizards

IXOR device data wizard

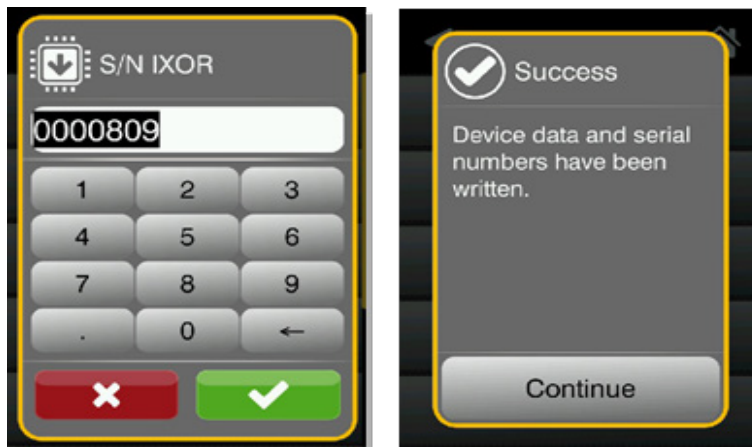
The device data wizard guides through the update of serial numbers of the IXOR itself and its electronic boards. This might be necessary when

- the CPU board was replaced e.g. because of a hardware defect,
- an electronic board was replaced, which does not store its serial number by itself (display- and stop board).

The serial number, part no., manufacturing date code and device width of the base unit can be found on the type plate. The serial numbers of the electronic boards are found on labels directly on the boards. To access the wizard you need to be authorized as service user. Then navigate to

Service ► Wizards ► IXOR device data

The wizard consists of several windows for each serial number and device data value. If a value is already set, it will be displayed in the text edit field. Navigate using the green button to reach the next data value and the red button for the previous value. The values are written at the end of the wizard and a message is displayed on error or success.



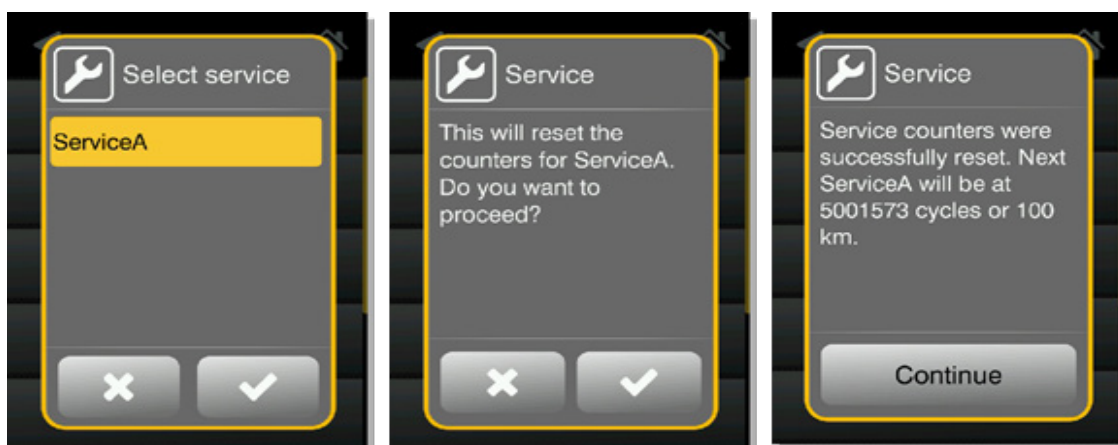
IXOR service wizard

The service wizard helps managing and resetting service notifications. To access the wizard you need to be authorized as service user. The appearance of service notifications is determined by both feed cycles and amount of transported label material. More information can be found in the technical manual in section 10 "service plan".

When the affected parts have been replaced or serviced according to the plan, the notifications needs to be reset properly. To do so, navigate to

Service ► Wizards ► IXOR service

The service counter needed to reset must be selected and confirmed. After successful reset, the next service interval is shown. The screenshots below show these steps:



9.7 OPC UA interface

There is an OPC UA server in the IXOR included. It depends on your purchase configuration if the feature is unlocked. Please contact your sales representative if you want to enable the feature for an already existing IXOR.

9.7.1 Menu configuration

The menu configuration for the OPC UA server is very simple. To enable the OPC UA server set

Service ► Interfaces ► OPC UA ► OPC UA = On	[OpcUaOn]
---	-----------

9.7.2 Connecting to server

To connect to the OPC UA server the IXOR must be reachable in the network using its given IP address. To connect use the following endpoint url:

opc.tcp://<IPADDR>:4840/

For reading of values only, you can connect anonymously. If you want to change values please connect using the following settings:

username: opcuser

password: opcpass

9.7.3 Server capabilities

- Security policies
 - None
 - Basic128Rsa15
 - Basic256Sha256
- Message security modes
 - Sign
 - Sign & encrypt

The messages are described in a separate file. Please follow the next link:

<https://www.cab.de/ftp/media/firmware/ixor/doc/current/messages.html>

In case this messages file is not displayed correctly in your browser, please use an other browser. (like Mozilla firefox)

Information - Information shows production statuses of the process or of the device.

ID	Group	Displayed text	Description	How to fix
107	Feed	Clamp roller open?	This note will be triggered if you have executed a manual feed and there is no STOP signal received.	Check if you clamp roller is correctly attached and the label web is moving. If so, check if the label stop sensor is correctly taught and if you receive a signal. The stop icon in the top right corner of the home screen will indicate if a signal at the STOP input is detected. If not, please check if the 24V power supply of the stop sensor is working, by checking Menu - Service - Diagnostics - Multimeter - I/O 24V.

Table 3 Example Information

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

ID	Group	Displayed text	Description	How to fix
101	Feed	Reverse master encoder direction.	Several START signals were received when the detected product speed has been negative..	Please check if the product speed displayed on the left quick button in the homescreen, show a positive value when your master encoder is rotating. To reverse the direction by software, change the ME direction parameter (Speed - ME direction).

Table 4 Example Warning

Error - Error messages show the disruption within the production process or the device and lead to an interruption of the work flow.

ID	Group	Displayed text	Description	How to fix
501	Unwinder	End of label reel.	End of label reel on unwinder 1 was detected.	If you don't want this error to be produced, disable the End of reel parameter (System - Error after - End of reel) .

Table 5 Example Error messages

Service - Service messages show the service cycle times.

ID	Group	Displayed text	Description	How to fix
301	Rewinder	Replace round belt	Round belt of the rewinder needs to be replaced, because 2.5m feed cycles or a total feed length of 50km was reached.	Please change the round belt and confirm the replacement in the menu.

Table 6 Example Service messages

11

Parameter

The parameters are described in a separate file. Please follow the next link:

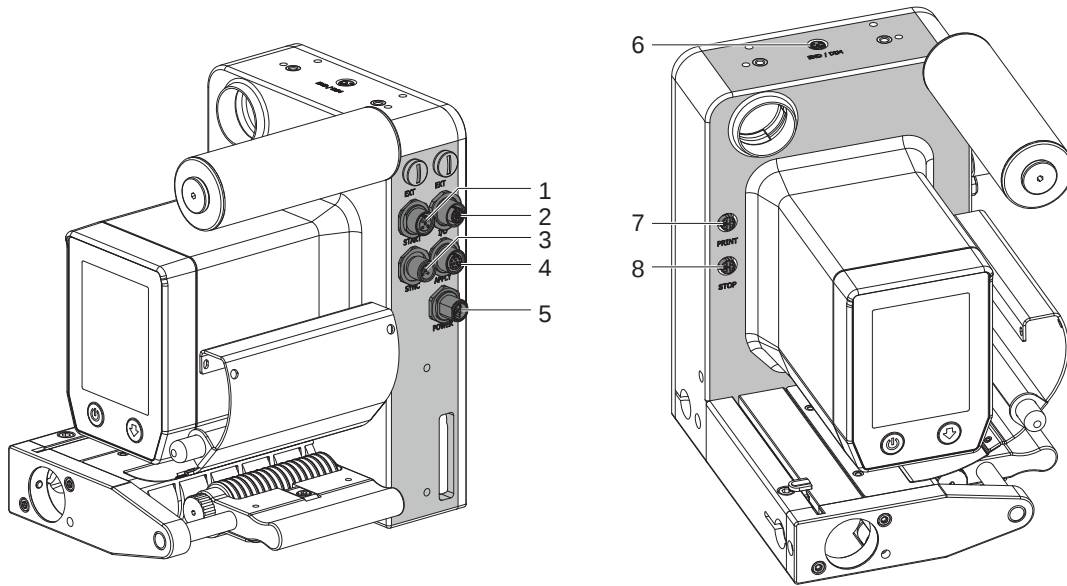
<https://www.cab.de/ftp/media/firmware/ixor/doc/current/parameters.html>

In case this parameter file is not displayed correctly in your browser, please use an other browser. (like Mozilla firefox)

ID	Icon	Title	Name	Min	Max	Default	Precision	Description
5		Speed	Speed	1 m/min	200 m/min	10 m/min	1/10	Label speed (if master encoder, then only for manual feed).

Table 7 Example Parameter

12.1 Overview

**Interface:**

- 1 START
- 2 I/O
- 3 SYNC
- 4 APPLY
- 5 POWER

- 6 END / DIM
- 7 PRINT
- 8 STOP

12.2 Interface Specification

Digital Inputs

- Conform to IEC/EN 61131-2 (Type 1+3)
- Operating voltage: 24 V DC (18..30 V)
- Switching logic: PNP
- Low level „0“: < 5 V DC
- High level „1“: > 15 V DC
- Input current per channel in 4..5 mA (at 24 V DC)
- Reverse polarity protection: Yes
- ESD protection: up to 8 kV
- Galvanic isolation: 3,75 kV

Digital Outputs

- Conform to IEC/EN 61131-2
- Operating voltage: 24 V DC (18..30 V)
- Max. output current:
 - Internal 24V per channel out: 500mA
 - total: 500mA
 - External 24V per channel out: 700mA
 - total: 1000mA
- Overload protection: Yes
- Short-circuit proof: Yes
- Reverse polarity protection: Yes
- ESD protection: up to 8 kV
- Galvanic isolation: 3,75 kV

12.3 START

Interface to start labeling and roller prism

Pin	Symbol	I/O	Description	Color	
1	24V	OUT	Power supply	brown	
2	PRISM	IN	Start product centering (e.g. roller prism)	white	
3	GND		Ground	blue	
4	START	IN	Start labeling	black	
5	START_X	IN	Internal test pin	gray	

12.4 SYNC

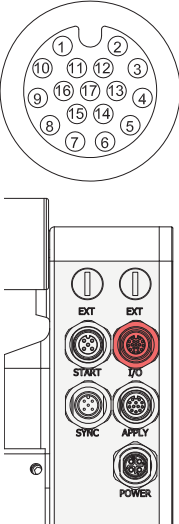
Speed synchronization e.g. via master encoder

Pin	Symbol	I/O	Description	Color	
1	24V	OUT	Power supply	brown	
2	ME_A	IN	Master encoder channel A	white	
3	GND		Ground	blue	
4	ME_B	IN	Master encoder channel B	black	
5	ME_X	IN	Internal test pin	gray	

12.5 I/O

Interface for PLC or signal lights

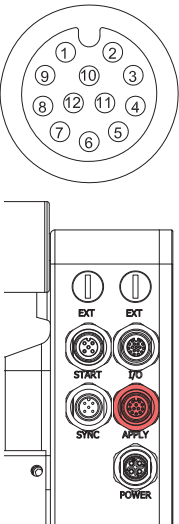
Pin	Symbol	I/O	Description	Color
1	24V	IN	Power supply	brown
2	GND		Ground	blue
3	BTN_FEED	OUT	Button FEED pressed	white
4	FEED	IN	Manual label feed	green
5	START	IN	Labeling start	pink
6	LOCK	I/O	Labeling locked	yellow
7	STOP	I/O	Stop label feed	black
8	FEEDING	OUT	Label transport in motion	gray
9	NO_LABEL	OUT	Missing label on label web	red
10	READY	OUT	Device ready for START	violet
11	DIM	OUT	Diminishing label reel	gray pink
12	END	OUT	End of label reel	red blue
13	ERROR	OUT	Device error	white green
14	RESET	IN	Reset error	brown green
15	ON	IN	Device ON (only if on/off switch has been disabled)	white yellow
16	USER_IN	IN	User defined input	yellow brown
17	USER_OUT	OUT	User defined output	white gray



12.6 APPLY

Connection to the applicator module

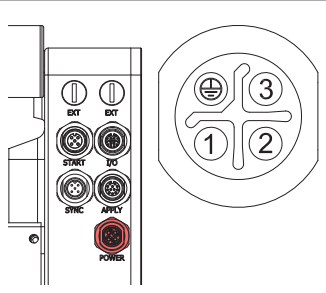
Pin	Symbol	I/O	Description	Color
1	24V	OUT	Power supply	brown
2	GND		Ground	blue
3	5V	OUT	USB power supply	white
4	USB1_P	I/O	USB data line +	green
5	USB1_N	I/O	USB data line -	pink
6	GND		USB ground	yellow
7	APPLY	OUT	Applicator unit (Pivot dispensing plate, telescope ...)	black
8	TAMP_HOME	IN	Applicator unit in home position	gray
9	TAMP_END	IN	Applicator unit in work position	red
10	BLOW	OUT	Blow off the label	violet
11	PRT	OUT	Start printing	orange
12	PRT_BUSY	IN	Printer busy/printer error	dark red



12.7 POWER

Power supply 100-240V AC (50-60Hz)

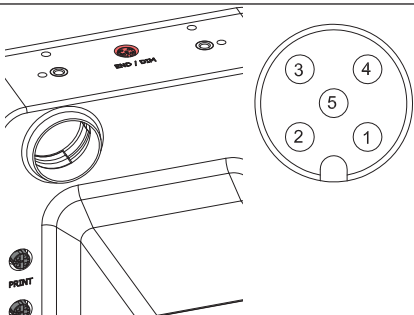
Pin	Symbol	I/O	Description	Color 5918758	Color 5918531
1	L	IN	Phase	black red	brown
2	DATA	I/O	cab PowerBus (IXOR=Master, Winder=Slave)	black white	N/C
3	N	IN	Neutral conductor	black green	blue
4	PE 	IN	Protective earth conductor	green yellow	green yellow



12.8 END / DIM

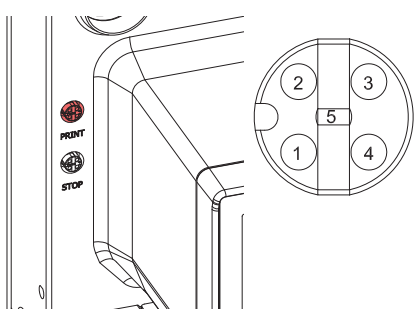
Sensor for end of reel/diminishing label reel (internal or external)

Pin	Symbol	I/O	Description	Color
1	24V	OUT	Power supply Sensor	brown
2	DIM_IN	IN	End of label reel sensor	white
3	GND_i		Ground	blue
4	END_IN	IN	Diminishing label reel sensor	black
5	END_DIM	IN	END/DIM sensor 3,3V only	gray



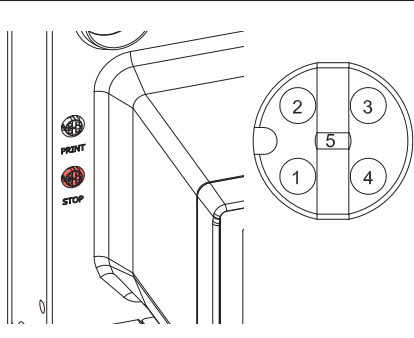
12.9 PRINT

Pin	Symbol	I/O	Description	Color
1	24V	OUT	Power supply	brown
2	APPLY	OUT	Applicator unit (Pivot plate, telescope ...)	white
3	GND		Ground	blue
4	PRT	OUT	Print signal	black
5	PRT_BUSY	IN	Printer busy/printer error	gray



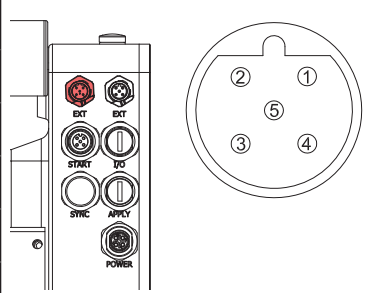
12.10 STOP

Pin	Symbol	I/O	Description	Color
1	24V	OUT	Power supply	brown
2	TEACH	OUT	"Teach" the label sensor and cab SensorBus	white
3	GND		Ground	blue
4	STOP	IN	Stop label feed (label sensor)	black
5	PE	OUT	PE XXX Protective earth for sensor housing	gray



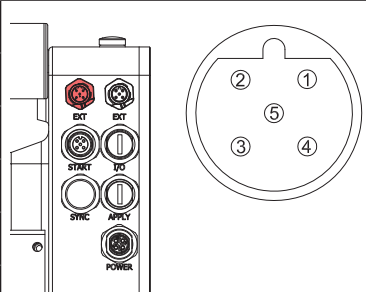
12.11 RS232 - optional

Pin	Symbol	I/O	Description	Color
1	+5V	Out	+5V	brown
2	TXD	I/O	RS232 TXD	white
3	GND		RS232 Ground	blue
4	RXD	I/O	RS232 RXD	black
5	PE		PE on cable protection	—



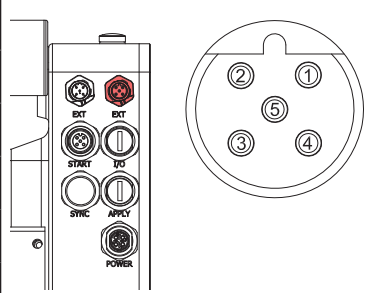
12.12 RS485 IN - optional

Pin	Symbol	I/O	Description	Color
1			NC	brown
2	RS485A	I/O	Bus cable RS485 A	white
3			NC	blue
4	RS485B	I/O	Bus cable RS485 B	black
5	PE		PE on cable protection	—



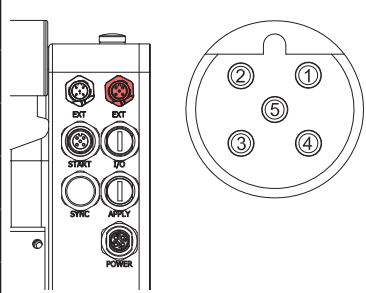
12.13 RS485 OUT - optional

Pin	Symbol	I/O	Description	Color
1	+5V	IN	+5V	brown
2	RS485A	I/O	Bus cable RS485 A	white
3	GND		RS232 Ground	blue
4	RS485B	I/O	Bus cable RS485 B	black
5	PE		PE on cable protection	—

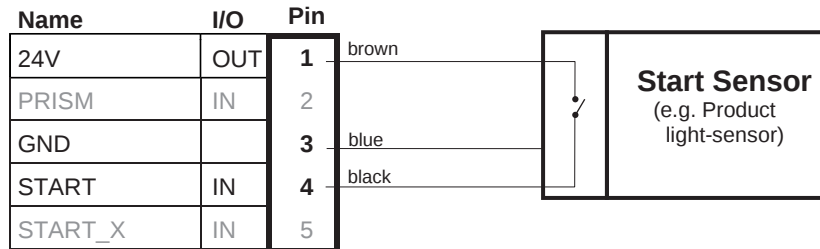


12.14 LAN Port 1 & Port 2- optional

Pin	Symbol	I/O	Description	Color
1	TD+	I/O	Ethernet TD+	brown
2	RD+	I/O	Ethernet RD+	white
3	TD-	I/O	Ethernet TD-	blue
4	RD-	I/O	Ethernet RD-	black
5	PE		PE on cable protection	—



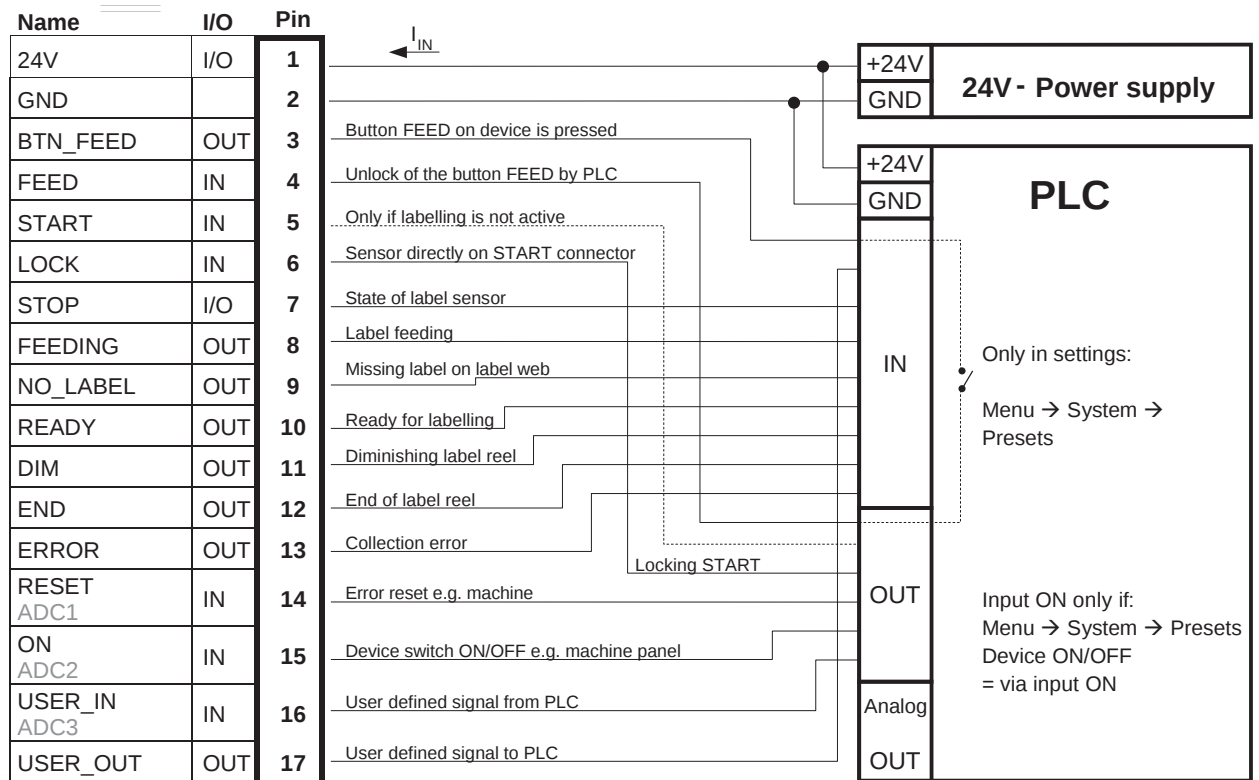
13.1 Start Sensor

START (M12 5-pin)

13.2 Connection to a PLC

Galvanically separated connections to a PLC:

Menu > System > I/O config > **Presets** > 24V for I/Os = use external 24V (or = autom. recognition)

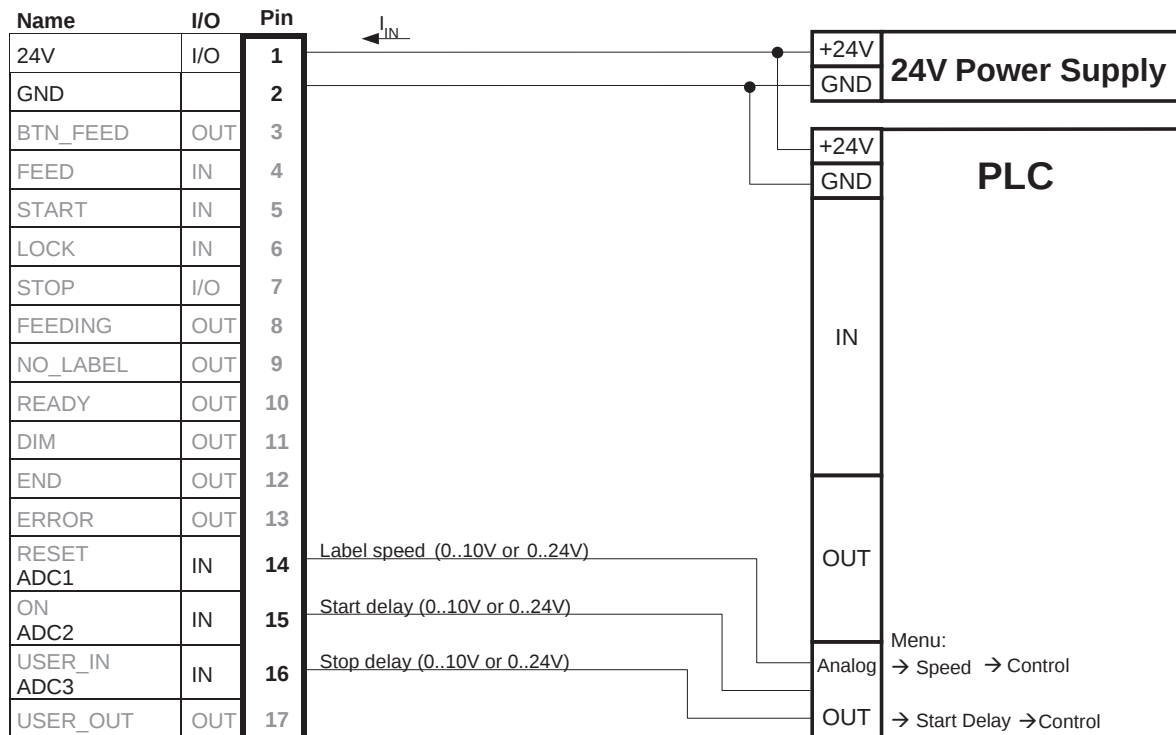
I/O (M12 17-pin)

13.3 Controlling via PLC

Galvanically separated connections to a PLC:

Menu > System > **Presets** > I/O config > 24V for I/Os = use external 24V (or = **autom. recognition** > Auto detection)

I/O (M12 17-pin)

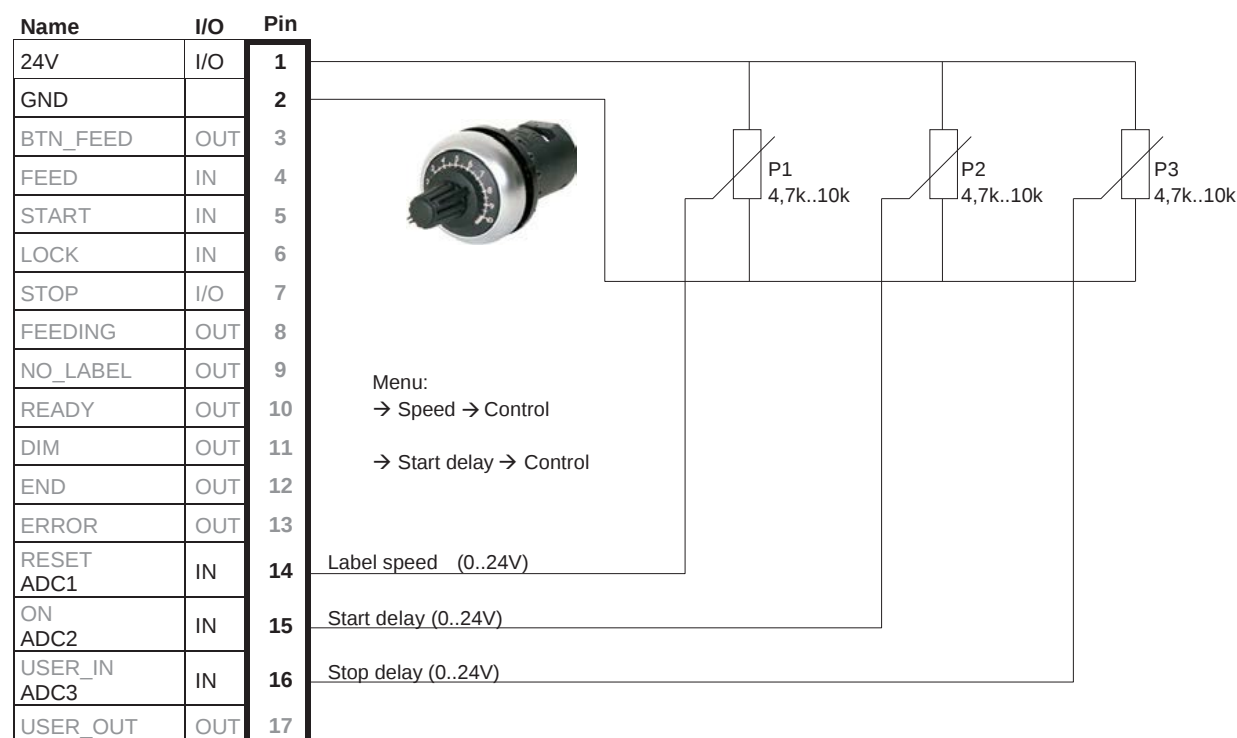


13.4 Controlling via manual regulator

Galvanically separated connections to a PLC:

Menu > System > **Presets** > I/O config > 24V for I/Os = use external 24V (or = **autom. recognition** > Auto detection)

I/O (M12 17-pin)

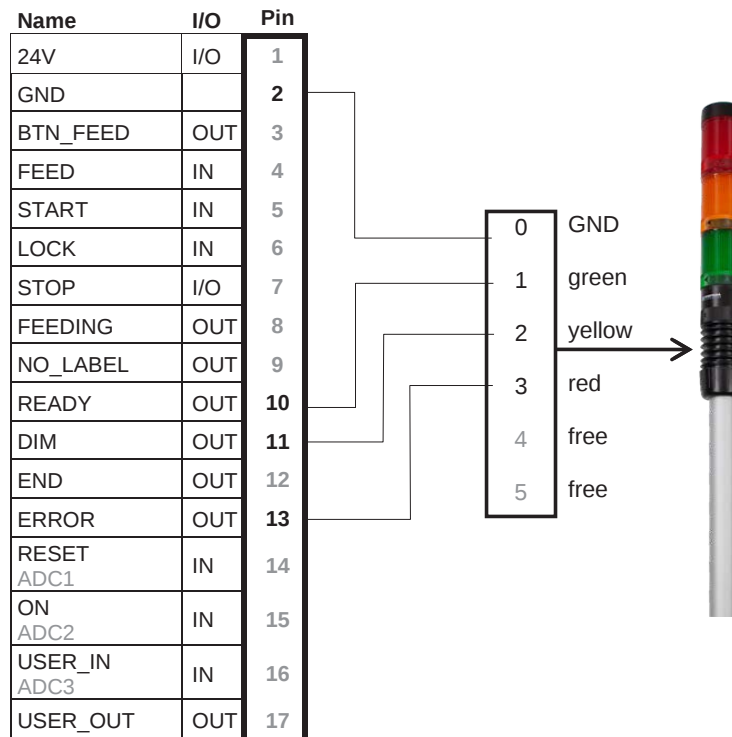


13.5 Connecting a Signal Light

Galvanically separated connections to a PLC:

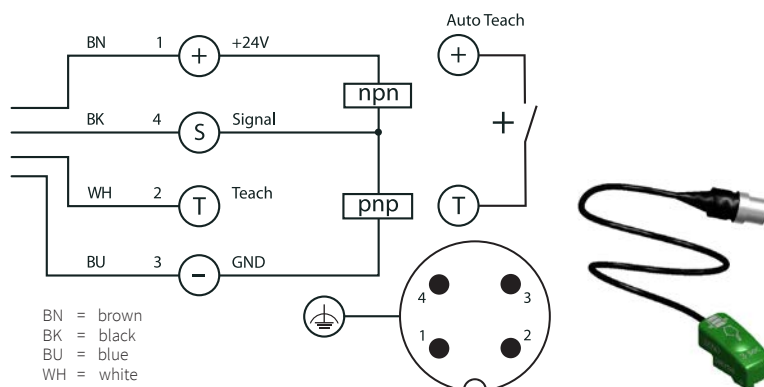
Menu > System > **Presets** > I/O config > 24V for I/Os = use external 24V (or = **autom. recognition** > Auto detection)

I/O (M12 17-pin)



13.6 Label sensor CEON

Pin assignment M12 5-pin a-coded



13.7 I/O-Box

For connecting additional peripherals (e.g. applicator units) to the IXOR label dispenser.
Including 12 digital inputs or outputs (M8 3pin, 24V DC, PNP logic).

Technical data

Digital inputs (up to 12)

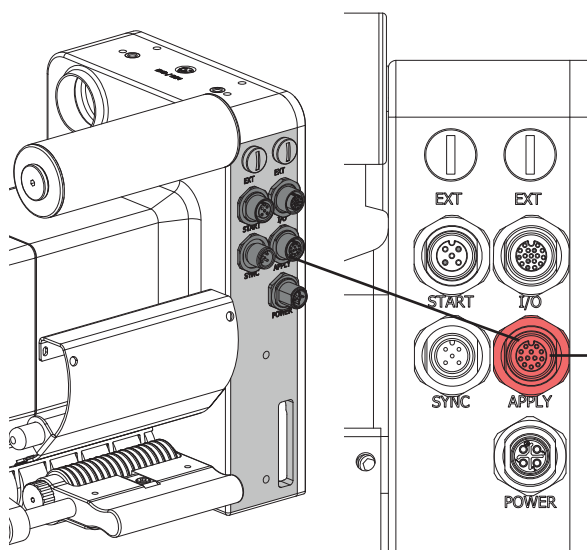
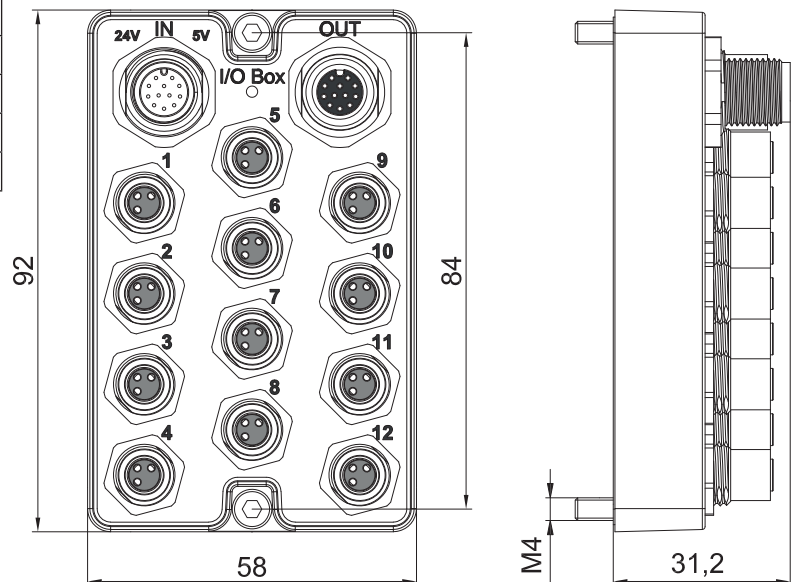
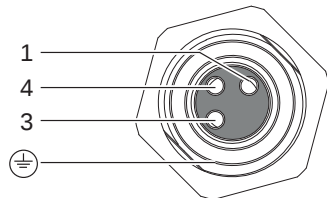
- Conform to IEC/EN 61131-2 (Type 1+3)
- Operating voltage: 24 V DC (18..30 V)
- Switching logic: PNP
- Low level „0“: < 5 V DC
- High level „1“: > 15 V DC
- Input current per channel: 4.5 mA
- Reverse polarity protection: Yes
- ESD protection: min. 8 kV
- Galvanic isolation: 3.75 kV
- Refresh rate: 1ms

Digital outputs (up to 12)

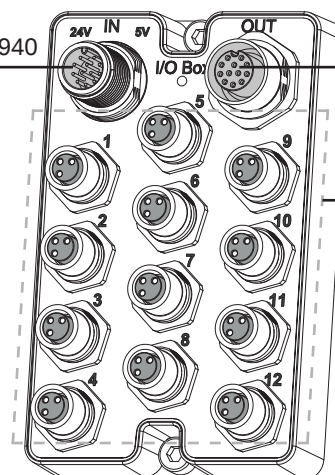
- Conform to IEC/EN 61131-2
- Operating voltage: 24 V DC (18..30 V)
- Max. output current:
 - Internal 24V per channel out: 500mA total: 500mA
 - External 24V per channel out: 700mA total: 1000mA
- Overload protection: Yes
- Short-circuit proof: Yes
- Reverse polarity protection: Yes
- ESD protection: min. 8 kV
- Galvanic isolation: 3.75 kV
- Refresh rate: 1ms

Pin	Symbol	I/O	Description
1	24 V	OUT	24V DC
3	GND		GND
4	IO	I/O	Input/Output
⊕	PE		Earth (Shield)

M8 3pin (female)



Only via
cab cable:
cab part no: 5918940

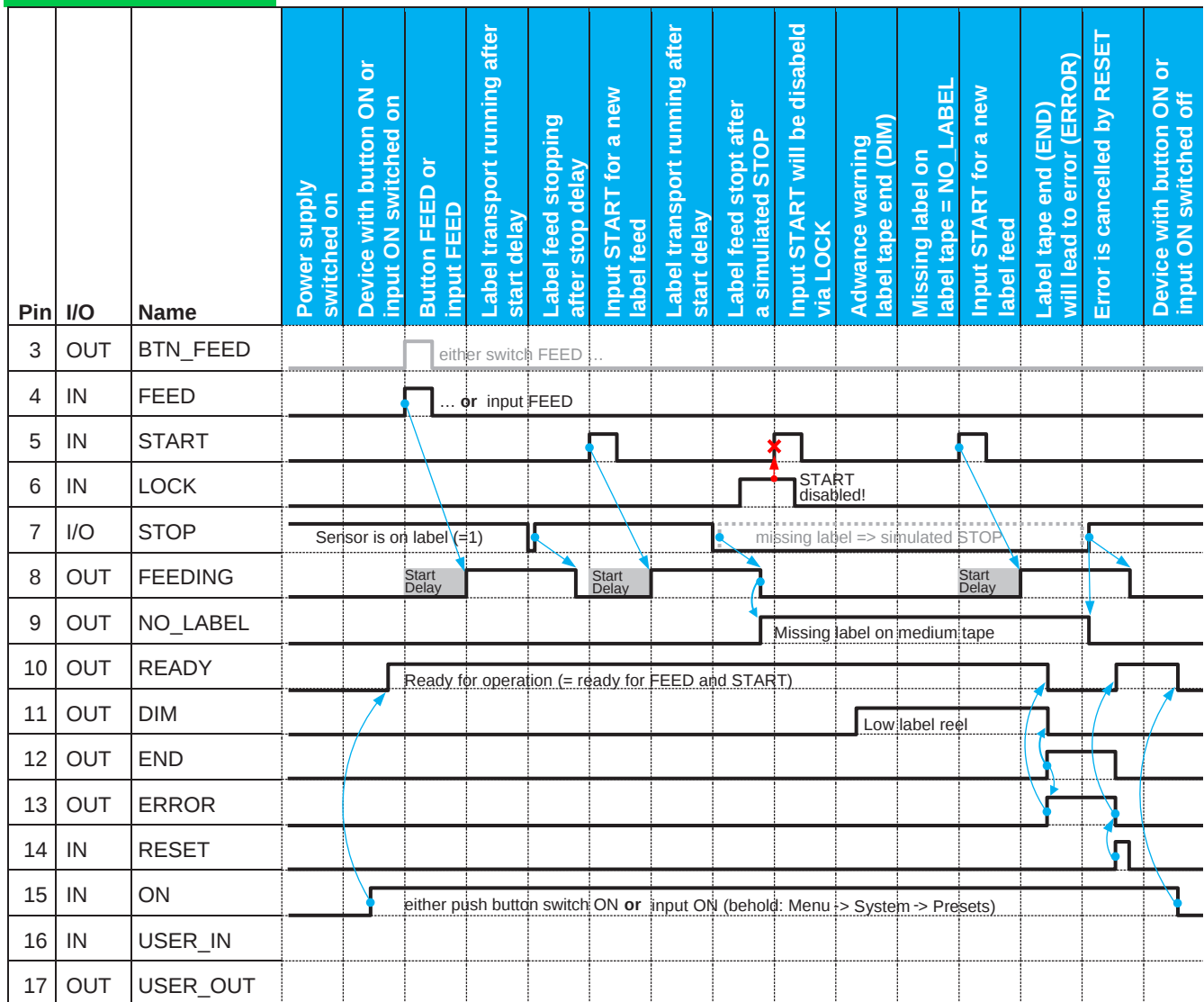


Next USB device
(max 2 devices!)
e.g. I/O Box 2,
external Display,
USB stick (by adapter)

In- or Output Ports

I/O

I/O-Interface (e.g. for PLC or signal lights)



15.1 Overview

- IXOR devices since FW 1.110 offer ModBus TCP support
- Please check the ModBus documentation on the device for the currently supported commands in that specific firmware
- Or visit <https://www.cab.de/en/marketing/print-apply/ixor/#software> to upgrade to the newest firmware
- Get the parameter documentation (includes parameter ID, default and min/max values and more) directly from your IXOR device via FTP / USB

15.1.1 Quick start guide

- Enable ModBus on your IXOR device
 - System → Interfaces → ModBus → ModBus TCP ✓
 - For simplicity choose 16-bit integer as datatype
 - On success connection status will display Listening on port 502
- Acquire an IP-address by enabling Wi-Fi or LAN and connecting to your network router
- On the command line of your windows or linux system try pinging the device by its IP-address, to ensure your IXOR can be accessed from your network
- Choose your favorite client application for a test run, recommendation:
<http://www.modbusdriver.com/modpoll.html>
- Read out the start delay (parameter ID 22) from your host system using:

```
modpoll -c1 -r22 -t3 -m tcp <IPADDR>
```

- where AAA.BBB.CCC.DDD should be the IXOR's IP address in your network
- On success modpoll's output should look like this:

```
modpoll 3.4 - FieldTalk(tm) Modbus(R) Master Simulator
Copyright (c) 2002-2013 proconX Pty Ltd
Visit http://www.modbusdriver.com for Modbus libraries and tools.

Protocol configuration: MODBUS/TCP
Slave configuration...: address = 1, start reference = 22, count = 1
Communication.....: 192.168.200.40, port 502, t/o 1.00 s, poll rate 1000 ms
Data type.....: 16-bit register, input register table

-- Polling slave... (Ctrl-C to stop)
[22]: 116
-- Polling slave... (Ctrl-C to stop)
[22]: 116
-- Polling slave... (Ctrl-C to stop)
```

- In this example the start delay was set to 11.6mm, which results in 116 being sent by IXOR, because the precision of the start delay parameter is one decimal place

15.1.2 Recommended literature and weblinks

Overview and up-to-date reference documents:

<http://www.modbus.org/specs.php>

Protocol specification:

http://www.modbus.org/docs/Modbus_Application_Protocol_V1_1b3.pdf

Modbus TCP/IP implementation guide:

http://www.modbus.org/docs/Modbus_Messaging_Implementation_Guide_V1_0b.pdf

Modpoll utility (all platforms) for testing:

<http://www.modbusdriver.com/modpoll.html>

15.2 Configuration

15.2.1 Connection status

Listening on port 502	The IXOR is listening on port 502 and ready for a new ModBus connection.
Connected to client	A client application is connected to port 502. ► Note that because of security concerns only one client can be connected at a time.
Disconnected by client	The client application has disconnected from IXOR.

15.2.2 Datatype

16-bit integer	Sufficient for accessing control and status parameters except overall counters
32-bit integer	Needed for overall counter read access
32-bit floating point	Can be more straight-forward to implement on your client application if your system supports it

15.3 Capabilities

15.3.1 Register-parameter mapping

The ModBus protocol specifies the telegram structure and the access to register on a ModBus compatible device. Therefore the mapping between the registers and the actual parameters is vendor specific and will be explained for the IXOR device in this chapter.

The mapping of the all registers and parameters depends on the selected datatype. If you change the datatype all parameters will be accessible with the corresponding mapping. The mapping is applicable to both reading and writing.

To access a parameter you first need to find out its parameter ID. A complete list of all available parameters can be found on the web interface of each IXOR device under <IPADDR>/para_doc.html.

Scaling of parameter values for 16-bit and 32-bit integer data types

To access the decimal places of parameter values with the 16-bit and 32-bit integer datatype, you need to scale the values appropriately. In the parameter description table (web-interface: <IPADDR>/para_doc.html) please check the precision column for each parameter. When reading data you need to multiply the received value with its precision to get the actual value. When writing data you need to divide the actual/desired value by its precision before sending it.

For example:

- Writing a speed value (ID=5) of 20.5 m/min with precision = 1/10:
- $20.5 / (1 / 10) = 205 = \text{value to be transmitted}$

16-bit integer: register address = parameter ID

Para-ID (int16)	1		2		3		4		5		6		7		8	
Register	1		2		3		4		5		6		7		8	
int16 value	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L

32-bit integer: register address = parameter ID x 2

Para-ID (int32)	1				2				3				4			
Register	2				3				4				5			
int 32 value	L				H				L				H			
	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L

32-bit floating point: register address = parameter ID x 2

Para-ID (float)	1		2		3		4	
Register	2		3		4		5	
Float value XXX Floating valueASS Ab	FLOAT		FLOAT		FLOAT		FLOAT	

15.3.2 Supported ModBus commands

Read input registers – 0x04

See modbus protocol specification on page 16 / section 6.4 for telegram structure.

- 16-bit integer: register address = parameter ID

To test this command try the following modpoll command:

```
modpoll -c20 -r1 -t3 -m tcp <IPADDR>
```

This will read 20 subsequent registers and display their values interpreted as 16-bit integers. Therefore this command displays parameters with IDs from 1 to 19. Note that any parameters with more than 16-bit will be truncated.

- 32-bit integer: register address = parameter ID x 2

To test this command try the following modpoll command:

```
modpoll -c20 -r2 -t3:int -m tcp <IPADDR>
```

This will read 40 subsequent registers and display their values interpreted as 32-bit integers. Note that two registers make up the value of one parameter. Therefore this command displays parameters with IDs from 1 to 19.

- 32-bit floating point: register address = parameter ID x 2

To test this command try the following modpoll command:

```
modpoll -c20 -r2 -t3:float -m tcp <IPADDR>
```

This will read 40 subsequent registers and display their values interpreted as 32-bit integers. Note that two registers make up the value of one parameter. Therefore this command displays parameters with IDs from 1 to 19.

Write single register – 0x06

See modbus protocol specification on page 19 / section 6.6 for telegram structure.

Write multiple registers – 0x10

See modbus protocol specification on page 30 / section 6.12 for telegram structure.

- 16-bit integer: register address = parameter ID + 1

To test this command try the following modpoll command:

```
modpoll -r25 -t4 -m tcp <IPADDR> 2000 3000 4000 5000
```

This will write 4 subsequent registers / parameters starting from ID=24 (Start Delay 2).

- 32-bit integer: register address = register address = (parameter ID x 2) + 1

To test this command try the following modpoll command:

```
modpoll -r49 -t4:int -m tcp <IPADDR> 2000 3000 4000 5000
```

This will write 8 subsequent registers, which equals 4 parameters interpreted as 32-bit numbers. This starts from register 48 (= parameter ID 24, Start Delay 2).

- 32-bit floating point: register address = (parameter ID x 2) + 1

To test this command use the following modpoll command:

```
modpoll -r49 -t4:float -m tcp <IPADDR> 200.0 300.0 400.0 500.0
```

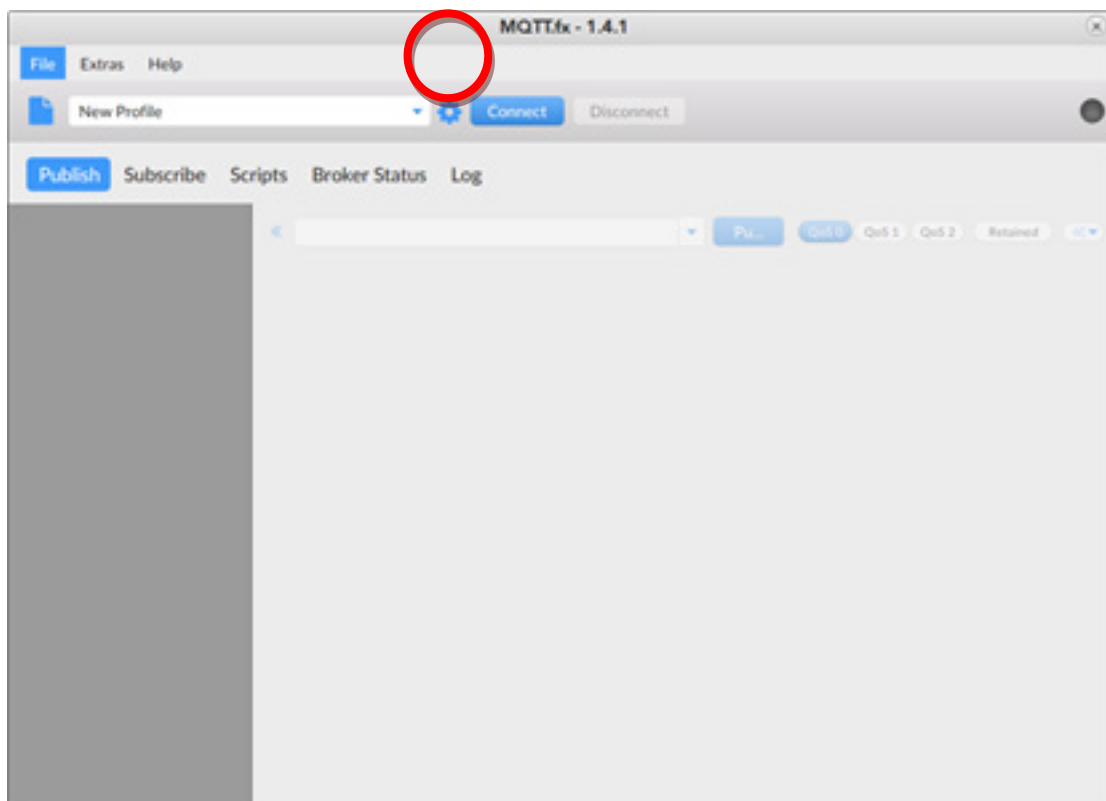
This will write 8 subsequent registers, which equals 4 parameters interpreted as 32-bit numbers. This starts from register 48 (= parameter ID 24, Start Delay 2).

16.1 Overview

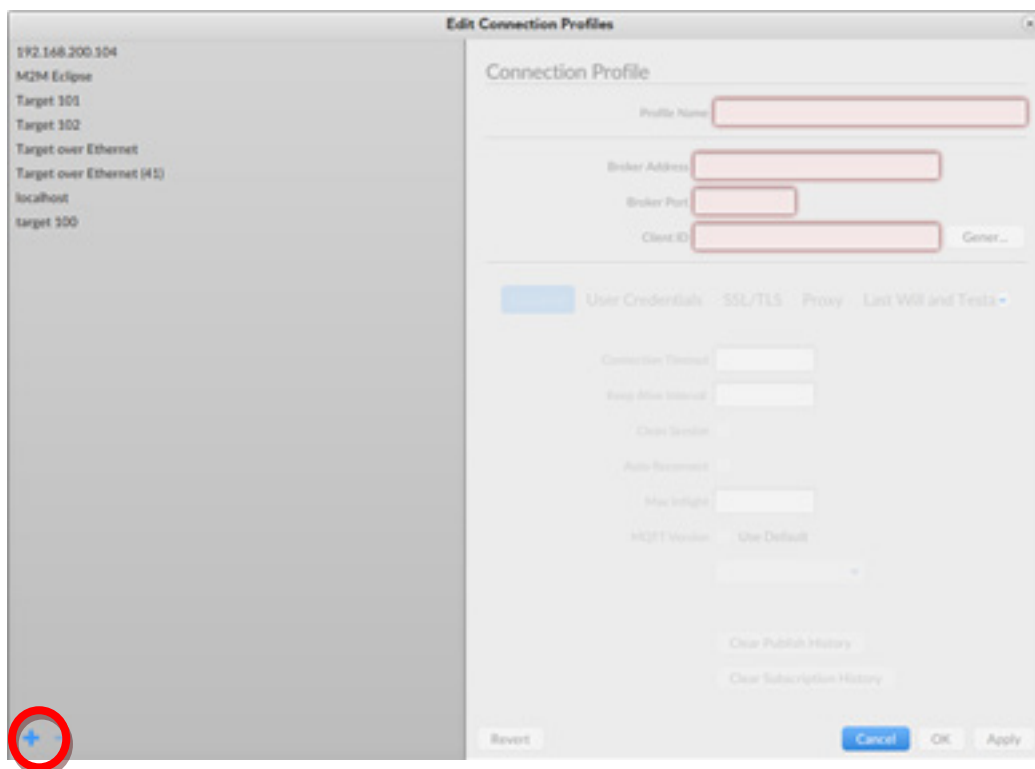
- IXOR devices since FW 1.099 offer MQTT support
- Please check the MQTT documentation on the device for the currently supported commands in that specific firmware
- Or visit <https://www.cab.de/en/marketing/print-apply/ixor/#software> to upgrade to the newest firmware
- Get the parameter documentation (includes parameter ID, default and min/max values and more) directly from your IXOR device via FTP / USB

16.1.1 Quick start guide

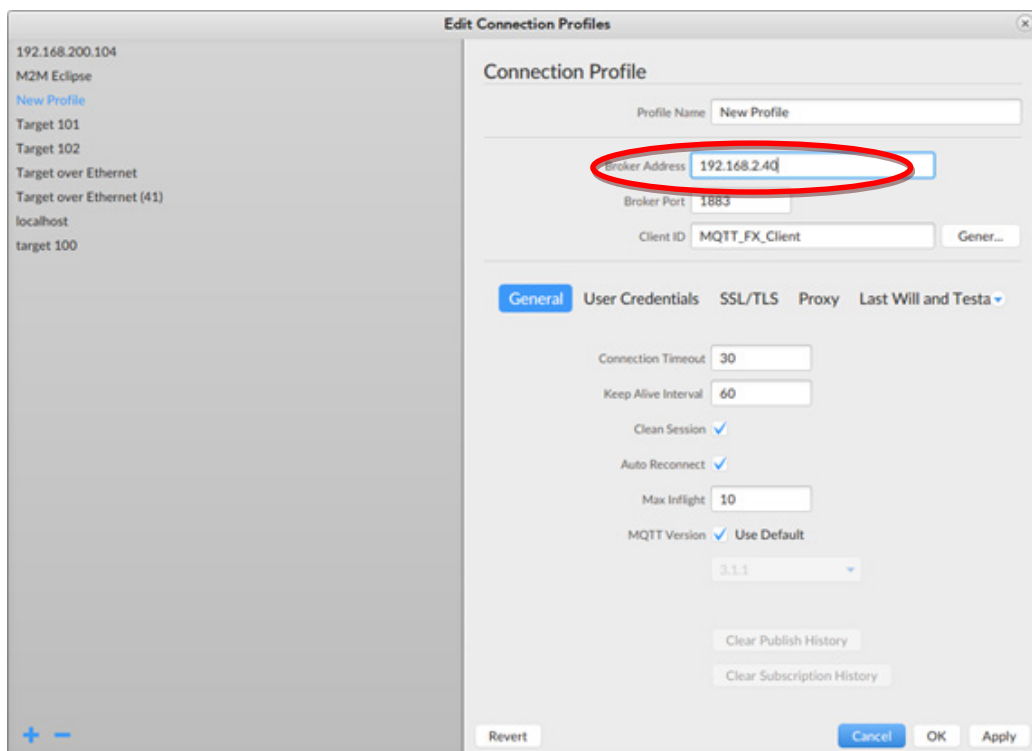
- Enable MQTT on your IXOR device
 - System → Interfaces → MQTT → Broker ✓
 - Broker status should say 'running now'
 - System → Interfaces → MQTT → Client ✓
 - Client will connect to the broker and change its status to 'connected: local broker'
- Acquire an IP-address by enabling Wi-Fi or LAN and connect to your network router or directly to your host device
- On the command line of your windows or linux system try pinging the device by its IP-address, to ensure your IXOR can be accessed from your network
- Choose your favorite client application for a test run, recommendation:
MQTT.fx (<http://mqttfx.jensd.de/>) – platform independent java-based client



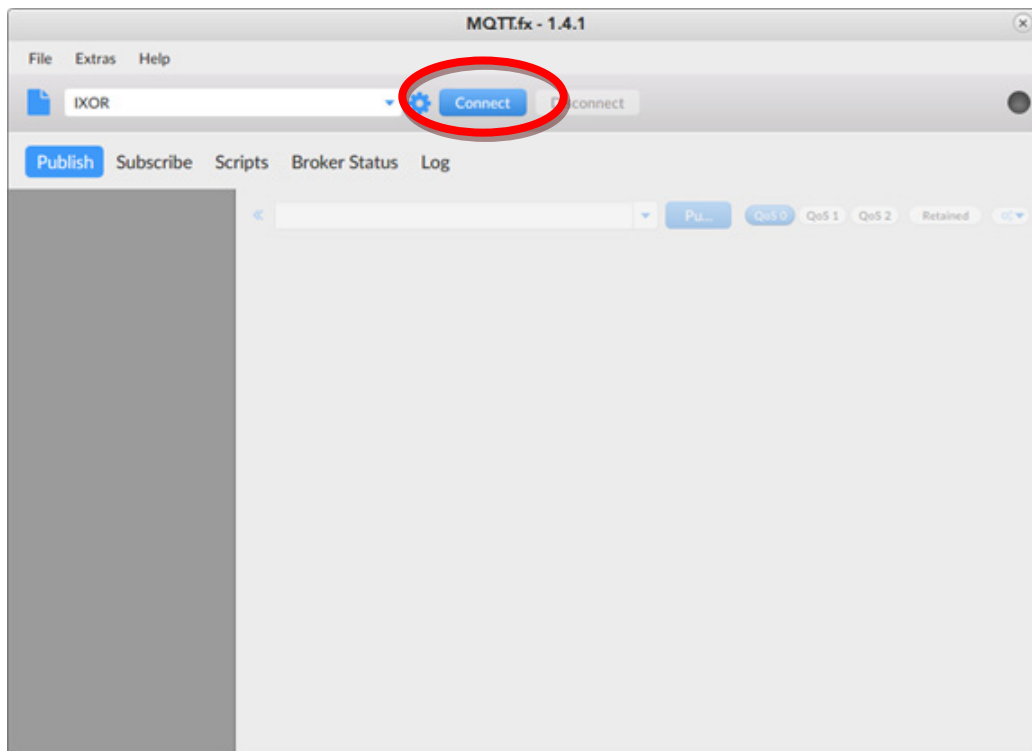
- Click on settings to create a new broker connection



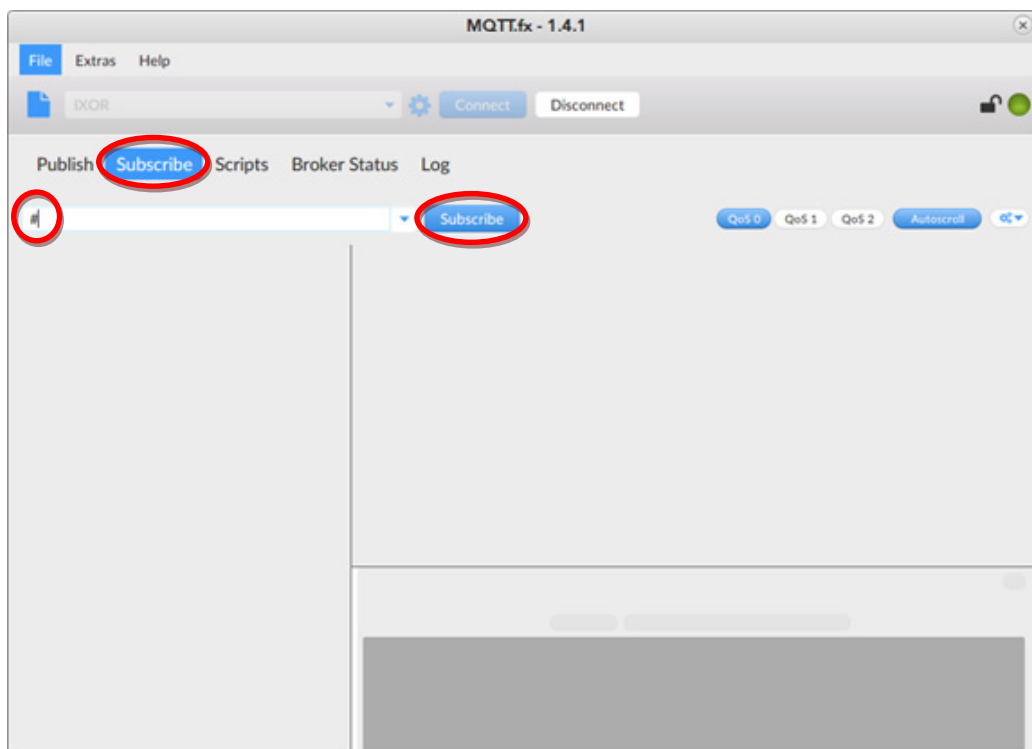
- Click on + to create a new profile



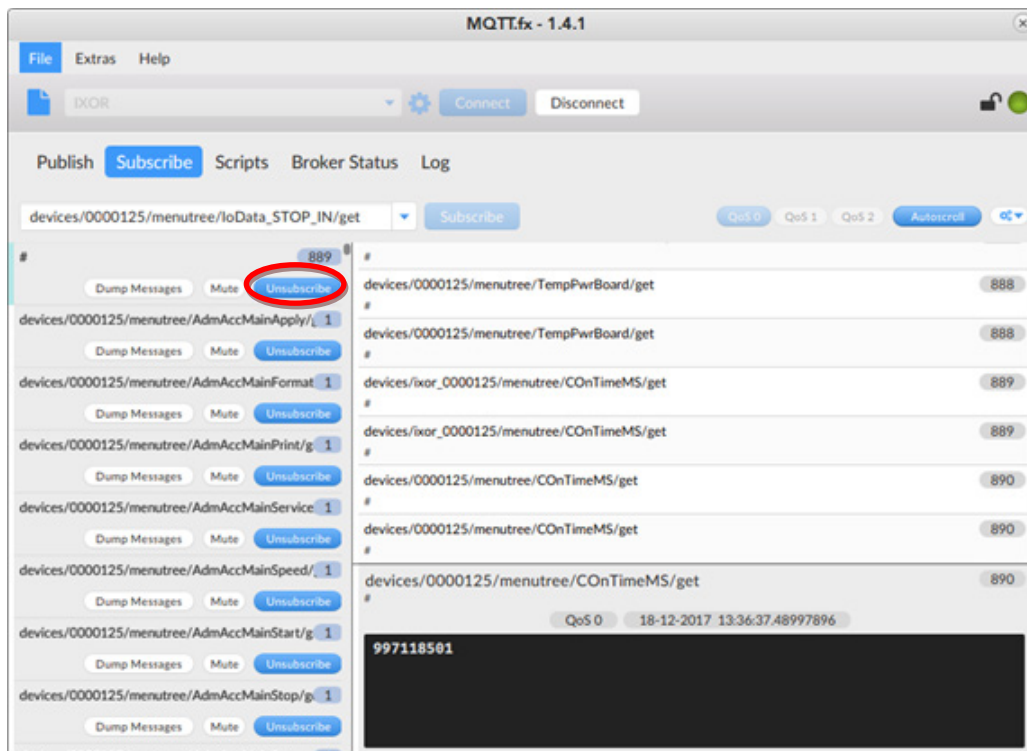
- Enter the IP address of your IXOR device into the broker address field and choose a desired profile name (e.g. IXOR)



- click connect to establish the connection to the IXOR's broker



- Change to the Subscribe tab and enter # into the topic field to subscribe to all topics
- To start the subscription click Subscribe



- This subscription will lead to an overload of messages, to stop the reception just click unsubscribe under the # topic
- A collection of all received messages will be seen on the right-side panel, this will give a first insight on the topic structure

16.1.2 Recommended literature and weblinks

Great overview by hivemq:

<https://www.hivemq.com/blog/mqtt-essentials-part-1-introducing-mqtt>

Short breakdown of important MQTT keywords:

<https://mosquitto.org/man/mqtt-7.html>

16.2 Architecture

MQTT networks will need a broker as the central message management point. IXOR provides an internal broker to be enabled. Anyhow, to exchange payload data IXOR also needs to be MQTT client, because a broker cannot publish or subscribe data to topics.

For controlling and monitoring of multiple IXOR devices, two approaches are feasible:

- configuring only one IXOR as broker,
- using an external broker.

In the first approach one IXOR needs to be configured as broker and therefore differently to the others, causing an asymmetrical behavior. Moreover if this IXOR is losing its network connection or powers down, the whole network will be disconnected. Nevertheless there is no additional software needed, the IXOR devices provide everything for building up a MQTT network.

The second approach will need a running broker, where the IXOR devices can connect to, for example on the users host PC. The IXOR devices can be configured symmetrically and any error on one of the devices can be tracked down very reliably. Nevertheless a MQTT broker needs to be configured.

16.3 Configuration

This chapter will give information on how to configure a MQTT connection to IXOR using the GUI interface.

16.3.1 Broker

Broker enabled / disabled

- Menu → System → Interfaces → MQTT → Broker

On Internal broker is active, clients can connect to it through port 1883

Off Internal broker is deactivated, yet the IXOR client may connect to another broker.

Broker status

- Menu → System → Interfaces → MQTT → Broker status

Running The broker is ready and will be waiting for a connection request on port 1883.

Not running The broker process is not active, please restart the broker by disabling and enabling the parameter Broker (Menu → System → Interfaces → MQTT → Broker)

16.3.2 Client

Client enabled / disabled

- Menu → System → Interfaces → MQTT → Client

On Client is active and can be connected to a broker, without connected broker the client serves no purpose.

Off Client is deactivated, without client no data can be transmitted or received via MQTT.

Client status

- Menu → System → Interfaces → MQTT → Client status

Not running The client process has been terminated, please disable and enabled it by changing Menu → System → Interfaces → MQTT → Client to off and the on

Starting The client process is starting, if this is shown more than 5 seconds, please restart the client.

Not connected A broker connection was not established since the client was started. Maybe your broker IP address cannot be reached?

Connected: <IP> The client is successfully connected to a broker.

Connected: local broker The client is connected to the internal broker, to reach this state enable the broker first and then the client.

Connection lost to broker After a successful connection the client was disconnected from the broker. This could be caused by a faulty network connection or a hang-up of the broker.

Broker IP

- Menu → System → Interfaces → MQTT → Broker IP

Set the IP address of the broker, the client should connect to.

Client ID

- Menu → System → Interfaces → MQTT → Client ID

Set a symbolic name by which the client will be addressed in the MQTT network

16.4 List of topics

All messages published by IXOR are flagged as retained, so any newly connected clients will see the current value (last change) of the subscribed parameter values. Variable topic are shown in square brackets and are described below:

- [serial number] ... the serial number of IXOR, this value cannot be changed
- [client-id] ... the symbolic name, which can be set by the Client ID parameter (Menu → System → Interfaces → MQTT → Client ID) and is set to ixor_[serial number] by default
- [parameter] ... the parameter name, which should be read or written

16.4.1 Network and connection information

Topic	Value	Description
network / activity / [client-id] / [serial number]	[empty]	Client is disconnected from broker
	1	Client is connected to broker

It is always a good start to subscribe to **network/#** to keep track of incoming connections and/or disconnecting clients.

16.4.2 Parameter access

The [parameter] identifier can be found by checking the parameter documentation, which can be accessed via the web interface of IXOR.

Read access

Topic	Value	Description
devices / [client-id] / menutree / [parameter] / get	dynamic	dynamic Parameter value, will be published on both topics
devices / [serial number] / menutree / [parameter] / get		
devices/ixor_0000123/menutree/StartDelay/get	100.0	

Write access

Topic	Value	Description
devices / [client-id] / menutree / [parameter] / set	dynamic	Parameter value, both topics will set the same parameter value
devices / [serial number] / menutree / [parameter] / set		
devices/0000123/menutree/StopDelay/set	11.2	

Value structure

Datatype	Structure
Numeric (16/32-bit unsigned/signed)	Plain text without unit, floating point numbers as plain text with period as decimal point
Boolean	Plain text: True == on; False == off
List	Plain text: integer value which indicates the list index, described in the parameter documentation
String	Plain text
Complex	Plain text, complex values are in general read-only

16.4.3 Backup and restore

Backup data in XML format can be downloaded from IXOR using the following topics:

Topic	Value	Description
devices / [client-id] / actions / backup / data	XML	Subscribe to this topic to receive backup data
devices / [client-id] / actions / backup	String	Publish the given string to this topic to receive:
	"formats"	All formats
	"config"	Configuration parameters
	"access"	Access data
	"logo"	The custom logo

To restore a given configuration using the backup data in XML format, the following topic must be used:

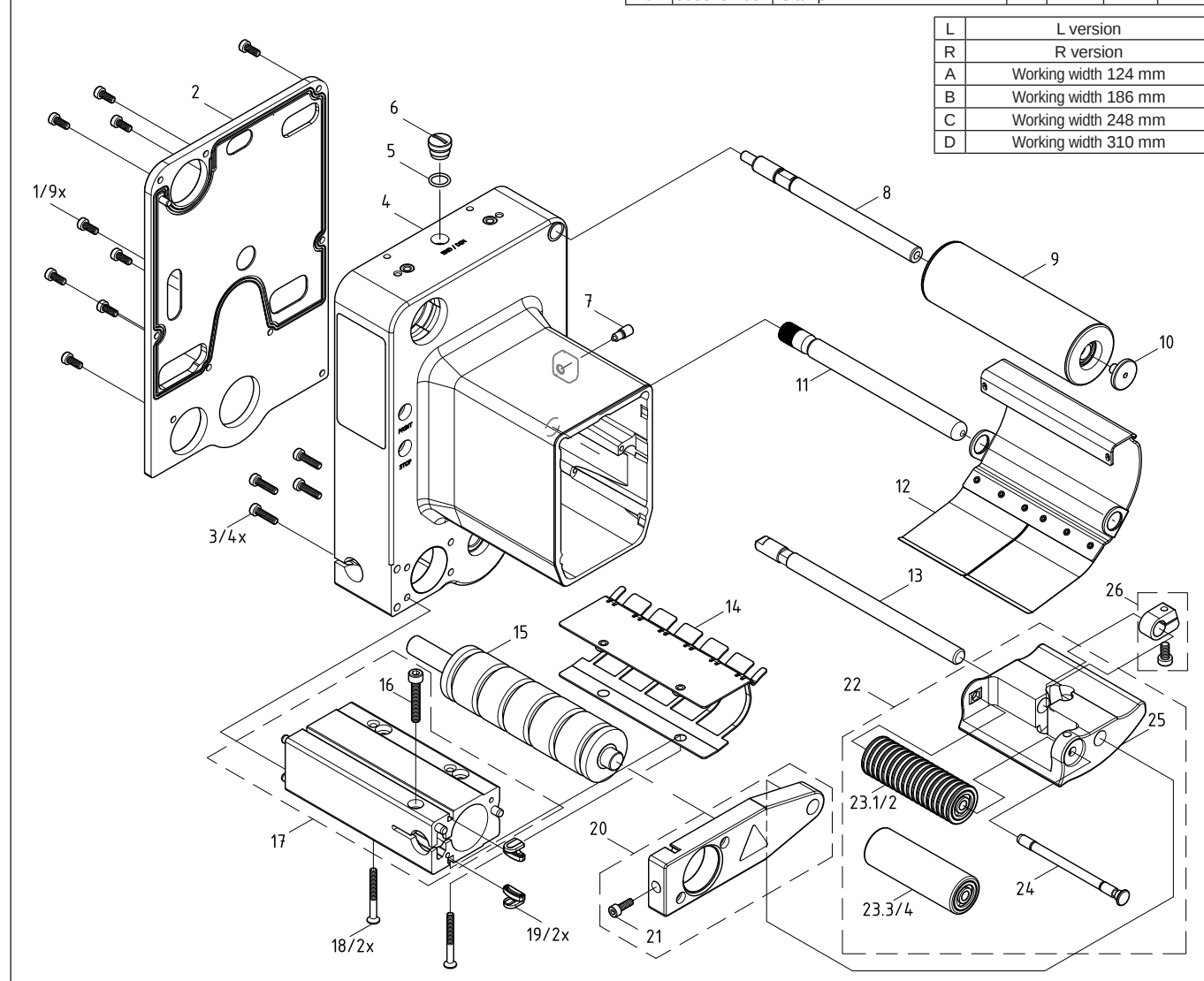
Topic	Value	Description
devices / [client-id] / actions / restore	XML	Publish the XML data to this topic.

A17 Spare parts

A1

A17.1 Base unit - Chassis, Guiding

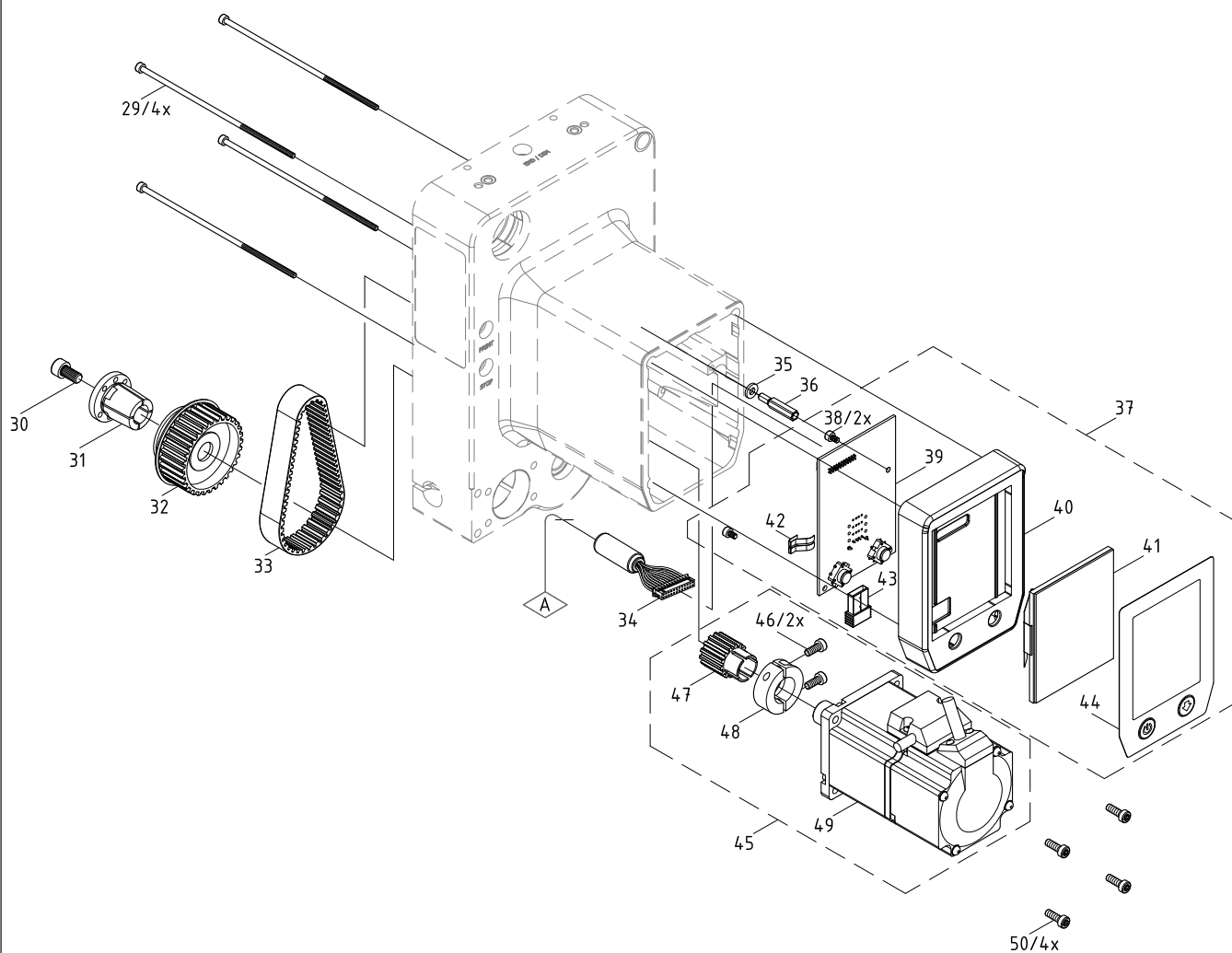
No	Part No.	Description	PU	Note	Serial No.	
					from	to
1	5909209.001	Screw DIN7984 M4x10	10			
2.1	5971205.001	Cover	1	L		
2.2	5983177.001	Cover	1	R		
3	5909207.001	Screw DIN7984 M4x16	10			
4.1	5971202.001	Chassis	1	L		
4.2	5971372.001	Chassis	1	R		
5	5907187.001	O-Ring 10x1,5	10			
6	5907284.001	Cover	1			
7	5983181.001	Set Screw	1			
8.1	5983189.001	Axle	1	A		
8.2	5983210.001	Axle	1	B		
8.3	5983332.001	Axle 248	1	C		
9.1	5907566.001	Belt Roller	1	A		
9.2	5907567.001	Belt Roller	1	B		
9.3	5907568.001	Belt Roller	1	C		
10	5983190.001	Screw	1			
11.1	5983179.001	Axle	1	A, B		
11.2	5983331.001	Axle	1	C, D		
12.1	5971247.001	Brake Plate	1	A, B		
12.2	5971376.001	Brake Plate	1	C, D		
13.1	5971255.001	Axle	1	A		
13.2	5983209.001	Axle	1	B		
13.3	5983335.001	Axle	1	C		
13.4	6121114.001	Axle	1	D		
14.1	5971218.001	Guiding Plate	1	A, C, D		
14.2	5983207.001	Guiding Plate	1	B, D		
15.1	5971229.001	Roller	1	A		
15.2	5971325.001	Roller	1	B		
15.3	5971323.001	Roller	1	C		
15.4	6121111.001	Roller	1	D		
16	5909208.001	Screw DIN912 M5x30	10			
17.1	5971210.001	Profile	1	A		
17.2	5971212.001	Profile	1	B		
17.3	5971214.001	Profile	1	C		
17.4	6121113.001	Profile	1	D		
18	5983192.001	Screw DIN7991 M4x37.5	10			
19	5971340.001	Margin Stop	1			
20	5971220.001	Bar	1			
21	5902428.001	Screw DIN912 M4x12	10			
22.1	6110120.001	Locking System	1	L, A, B		
22.2	6110123.001	Locking System	1	R, A, B		
22.3	6110128.001	Locking System	1	L, C, D		
22.4	6110131.001	Locking System	1	R, C, D		
23.1	5971227.001	Pinch Roller	1	A, B		
23.2	6110109.001	Pinch Roller	1	C, D		
23.3	6110097.001	Pinch Roller	1	A, B, O		
23.4	6110099.001	Pinch Roller	1	C, D, O		
24.1	6110117.001	Axle	1	A, B		
24.2	6110125.001	Axle	1	C, D		
25.1	6110119.001	Lever	1	L, A, B		
25.2	6110122.001	lever	1	R, A, B		
25.3	6110127.001	Lever	1	L, C, D		
25.4	6110130.001	Lever	1	R, C, D		
26	5983191.001	Clamp	1			



A17.2 Base unit - Control panel, Motor

No	Part No.	Description	PU	Note	Serial No.	
					from	to
29	5971232.001	Screw M3x123	1			
30	5902137.001	Screw DIN912-M6x12	10			
31	5971241.001	Cone	1			
32	5971244.001	Gear 32	1			
33	5907112.001	Belt	1			
34	5550945.001	Cable Display	1			
35	5903005.001	Washer DIN9021-4.3	10			
36	5983168.001	Bolt	1			
37	5971274.001	Control Panel	1			
38	5902168.001	Screw DIN912-M3x5	10			
39	5971271.001	PCB Display	1			
40	5971326.001	Cover Display	1			
41	5918501.001	Display	1			
42	5918336.001	Contact Spring	1			
43	5918628.001	Wlan USB Adapter	1			
44	5971273.001	Foil Display	1			
45	5983298.001	Motor	1			
46	5902565.001	Screw DIN7984-M4x10	10			
47	5971236.001	Gear 14	1			
48	5971240.001	Clamping Ring	1			
49	5919591.001	Motor	1	M		
50	5902836.001	Screw DIN7984-M4x12	10			

Note:	M	in the case of an exchange, make sure that the IXOR firmware 1.40 and higher is installed
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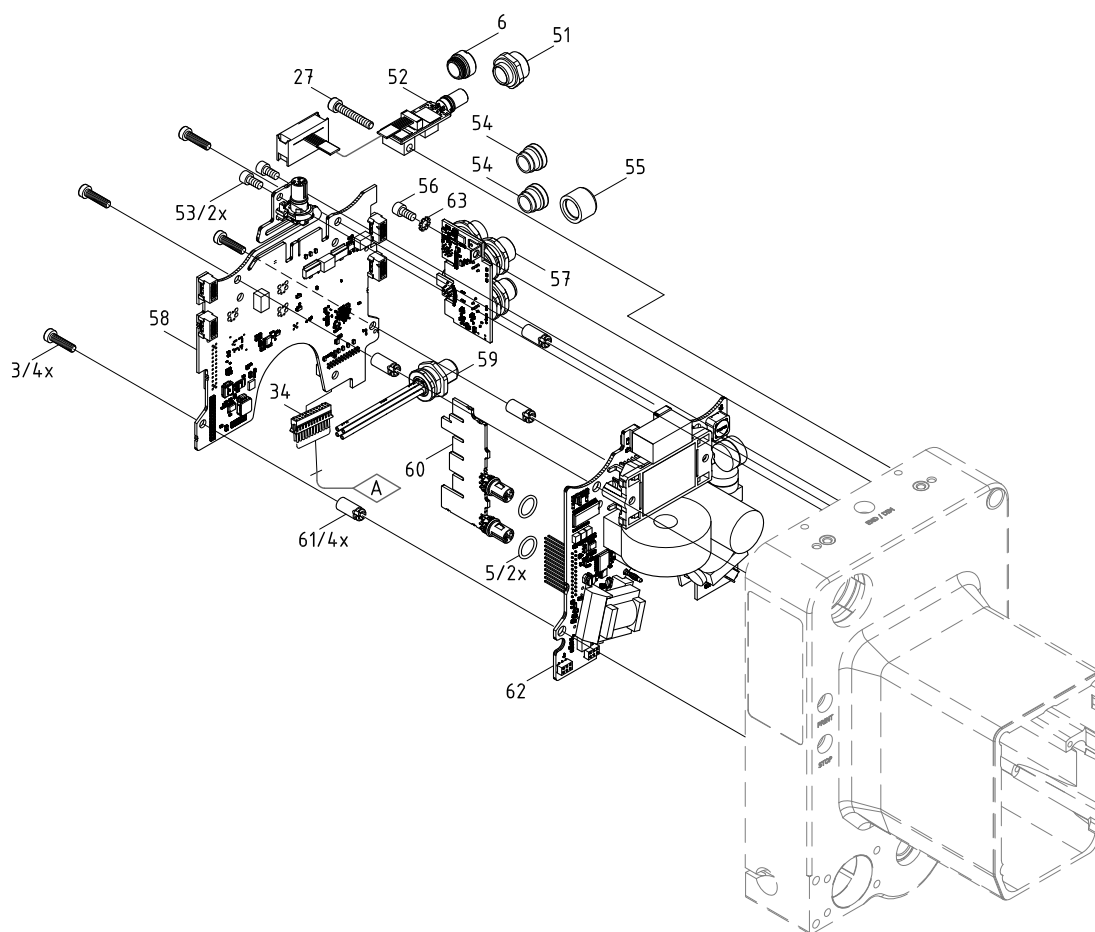


A17 Spare parts

A3

A17.3 Base unit - Electronics

No	Part No.	Description	PU	Note	Serial No.	
					from	to
3	5909207.001	Screw DIN7984 M4x16	10			
5	5907187.001	O-Ring 10x1,5	10			
6	5907284.001	Cover	1			
27	5902322.001	Screw DIN912-M4x25	10			
34	5550945.001	Cable Display	1			
51	5918626.001	Built-in Chassis	1			
52	5977657.001	PCB LAN	1			
53	5902049.001	Screw DIN912-M4x6	10			
54	5907155.001	Cover	1			
55	5907213.001	cover	1			
56	5902571.001	Screw DIN7984-M4x6	10			
57	5971264.001	PCB IO	1			
58	5971300.001	PCB CPU	1			
59	5918424.001	Cable	1			
60	5550197.001	PCB STOP	1			
61	5918398.001	Distance Bushing	1			
62	5971262.001	PCB Power	1			
63	5903117.001	Toothed Washer DIN6797-A4,3	10			



A17.4 Base unit - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Serial No.	
												from	to
1		A3	60	5550197.001	PCB STOP	1	-	-	-	-			
2		A2	A3	34	5550945.001	Cable Display	1	-	-	-	-		
3			A3	53	5902049.001	Screw DIN912-M4x6	10	-	-	-	-		
4		A2		30	5902137.001	Screw DIN912-M6x12	10	-	-	-	-		
5		A2		38	5902168.001	Screw DIN912-M3x5	10	-	-	-	-		
6			A3	27	5902322.001	Screw DIN912-M4x25	10	-	-	-	-		
7	A1			21	5902428.001	Screw DIN912 M4x12	10	-	-	-	-		
8		A2		46	5902565.001	Screw DIN7984-M4x10	10	-	-	-	-		
9			A3	56	5902571.001	Screw DIN7984-M4x6	10	-	-	-	-		
10		A2		50	5902836.001	Screw DIN7984-M4x12	10	-	-	-	-		
11		A2		35	5903005.001	Washer DIN9021-4.3	10	-	-	-	-		
12			A3	A3	5903117.001	Toothed Washer DIN6797-A4,3	10	-	-	-	-		
13		A2		33	5907112.001	Belt	1	A	B	C	D		
14			A3	54	5907155.001	Cover	1	-	B	C	D		
15	A1		A3	5	5907187.001	O-Ring 10x1,5	10	-	-	-	-		
16			A3	55	5907213.001	cover	1	-	B	C	D		
17	A1		A3	6	5907284.001	Cover	1	-	B	C	D		
18	A1			9.1	5907566.001	Belt Roller	1	-	-	-	-	A	
19	A1			9.2	5907567.001	Belt Roller	1	-	-	-	-	B	
20	A1			9.3	5907568.001	Belt Roller	1	-	-	-	-	C	
21	A1		A3	3	5909207.001	Screw DIN7984 M4x16	10	-	-	-	-		
22	A1			16	5909208.001	Screw DIN912 M5x30	10	-	-	-	-		
23	A1			1	5909209.001	Screw DIN7984 M4x10	10	-	-	-	-		
24		A2		42	5918336.001	Contact Spring	1	-	-	-	-		
25			A3	61	5918398.001	Distance Bushing	1	-	-	-	-		
26			A3	59	5918424.001	Cable	1	-	-	-	-		
27		A2		41	5918501.001	Display	1	-	-	-	-		
28			A3	51	5918626.001	Built-in Chassis	1	-	-	-	-		
29		A2		43	5918628.001	Wlan USB Adapter	1	-	-	-	-		
30		A2		49	5919591.001	Motor	1	-	-	-	-	M	
31	A1			4.1	5971202.001	Chassis	1	-	-	-	-	L	
32	A1			2.1	5971205.001	Cover	1	-	-	-	-	L	
33	A1			17.1	5971210.001	Profile	1	-	-	-	-	A	
34	A1			17.2	5971212.001	Profile	1	-	-	-	-	B	
35	A1			17.3	5971214.001	Profile	1	-	-	-	-	C	
36	A1			14.1	5971218.001	Guiding Plate	1	-	B	C	D	A, C, D	
37	A1			20	5971220.001	Bar	1	-	-	-	-		
38	A1			23.1	5971227.001	Pinch Roller	1	A	B	C	D	A, B	
39	A1			15.1	5971229.001	Roller	1	A	B	C	D	A	
40		A2		29	5971232.001	Screw M3x123	1	-	-	-	-		
41		A2		47	5971236.001	Gear 14	1	-	-	-	-		
42		A2		48	5971240.001	Clamping Ring	1	-	-	-	-		
43		A2		31	5971241.001	Cone	1	-	-	-	-		
44		A2		32	5971244.001	Gear 32	1	-	-	-	-		
45	A1			12.1	5971247.001	Brake Plate	1	-	B	C	D	A, B	
46	A1			13.1	5971255.001	Axle	1	-	-	-	-	A	
47			A3	62	5971262.001	PCB Power	1	-	-	-	-		
48			A3	57	5971264.001	PCB IO	1	-	-	-	-		
49		A2		39	5971271.001	PCB Display	1	-	-	-	-		
50		A2		44	5971273.001	Foil Display	1	-	-	-	-		
51		A2		37	5971274.001	Control Panel	1	-	B	C	D		
52			A3	58	5971300.001	PCB CPU	1	-	-	-	-		
53	A1			15.3	5971323.001	Roller	1	A	B	C	D	C	
54	A1			15.2	5971325.001	Roller	1	A	B	C	D	B	

PU Package unit

Notes

L L version

M in the case of an exchange, make sure that the IXOR firmware 1.40 and higher is installed

SPR Recommendation

A - wearing parts and accessories

B - recommended spare parts for quick repair

C - recommended spare parts for distributors

D - recommended spare parts for central stores

A Working width 124 mm

B Working width 186 mm

C Working width 248 mm

D Working width 310 mm

A17.4 Base unit - Spare Parts IndexIndex

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Serial No.	
												from	to
55		A2	40	5971326.001	Cover Display	1	-	-	-	-			
56	A1		19	5971340.001	Margin Stop	1	A	B	C	D			
57	A1		4.2	5971372.001	Chassis	1	-	-	-	-	R		
58	A1		12.2	5971376.001	Brake Plate	1	-	B	C	D	C, D		
59		A3	52	5977657.001	PCB LAN	1	-	-	-	-			
60		A2	36	5983168.001	Bolt	1	-	-	-	-			
61	A1		2.2	5983177.001	Cover	1	-	-	-	-	R		
62	A1		11.1	5983179.001	Axle	1	-	-	-	-	A, B		
A3	A1		7	5983181.001	Set Screw	1	-	B	C	D			
64	A1		8.1	5983189.001	Axle	1	-	-	-	-	A		
65	A1		10	5983190.001	Screw	1	-	B	C	D			
66	A1		26	5983191.001	Clamp	1	A	B	C	D			
67	A1		18	5983192.001	Screw DIN7991 M4x37.5	10	-	-	-	-			
68	A1		14.2	5983207.001	Guiding Plate	1	-	B	C	D	B, D		
69	A1		13.2	5983209.001	Axle	1	-	-	-	-	B		
70	A1		8.2	5983210.001	Axle	1	-	-	-	-	B		
71		A2	45	5983298.001	Motor	1	-	-	-	-			
72	A1		11.2	5983331.001	Axle	1	-	-	-	-	C, D		
73	A1		8.3	5983332.001	Axle 248	1	-	-	-	-	C		
74	A1		13.3	5983335.001	Axle	1	-	-	-	-	C		
75	A1		23.3	6110097.001	Pinch Roller	1	-	-	-	-	A, B, O		
76	A1		23.4	6110099.001	Pinch Roller	1	-	-	-	-	C, D, O		
77	A1		23.2	6110109.001	Pinch Roller	1	-	-	-	-	C, D		
78	A1		24.1	6110117.001	Axle	1	-	-	-	-	A, B		
79	A1		25.1	6110119.001	Lever	1	-	-	-	-	L, A, B		
80	A1		22.1	6110120.001	Locking System	1	-	-	-	-	L, A, B		
81	A1		25.2	6110122.001	lever	1	-	-	-	-	R, A, B		
82	A1		22.2	6110123.001	Locking System	1	-	-	-	-	R, A, B		
83	A1		24.2	6110125.001	Axle	1	-	-	-	-	C, D		
84	A1		25.3	6110127.001	Lever	1	-	-	-	-	L, C, D		
85	A1		22.3	6110128.001	Locking System	1	-	-	-	-	L, C, D		
86	A1		25.4	6110130.001	Lever	1	-	-	-	-	R, C, D		
87	A1		22.4	6110131.001	Locking System	1	-	-	-	-	R, C, D		
88	A1		15.4	6121111.001	Roller	1	A	B	C	D	D		
89	A1		17.4	6121113.001	Profile	1	-	-	-	-	D		
90	A1		13.4	6121114.001	Axle	1	-	-	-	-	D		

PU Package unit

Notes

L L version

M in the case of an exchange, make sure that the IXOR firmware 1.40 and higher is installed

SPR Recommendation

A - wearing parts and accessories

B - recommended spare parts for quick repair

C - recommended spare parts for distributors

D - recommended spare parts for central stores

A Working width 124 mm

B Working width 186 mm

C Working width 248 mm

D Working width 310 mm

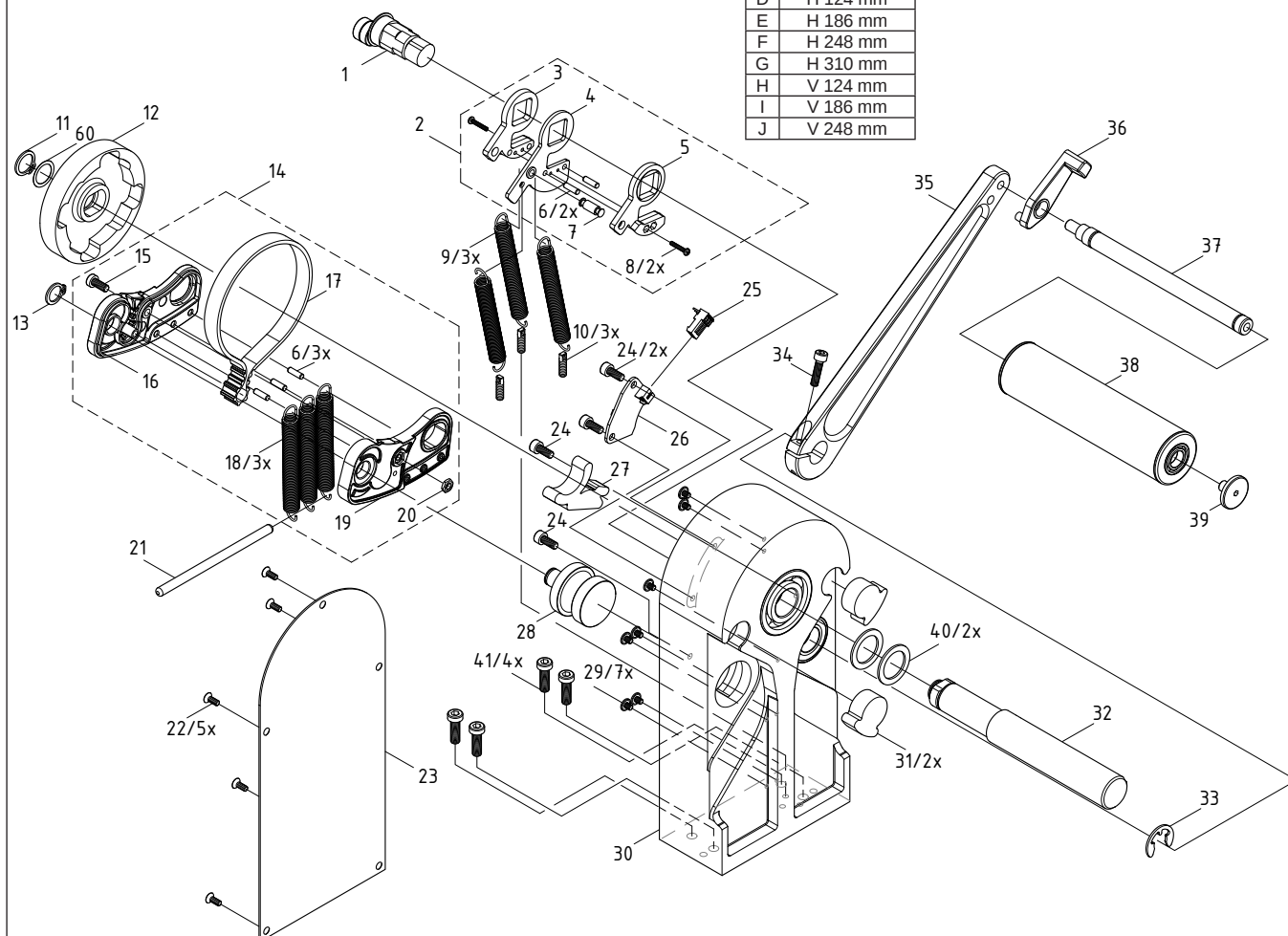
A17.5 Unwinder - Chassis, Pendulum

No	Part No.	Description	PU	Note	Serial No.	
					from	to
1	5977632.001	Pendulum Axle	1			
2	5977613.001	Lever	1			
3	5983266.001	Lever 1	1			
4	5977609.001	Lever	1			
5	5983267.001	Lever 2	1			
6	5904122.001	Pin DIN7-3m6x8	10			
7	5977612.001	Pin	10			
8	5902345.001	Screw DIN7985-M2x12	10			
9	5906323.001	Spring	1			
10	5907387.001	Spring Bolt	1			
11	5903517.001	Snap Ring DIN471-12x1	10			
12	6110004.001	Brake Disk	1	K	E16	
13	5903553.001	Snap Ring DIN471-10	10			
14	5977633.001	Brake Lever	1			
15	5902421.001	Screw DIN7984-M4x10	10			
16	5977622.001	Half Shell 1	1			
17	5907385.001	Belt	1			
18	5906302.001	Spring	1			
19	5977623.001	Half Shell 2	1			
20	5902582.001	Nut DIN439-M4	10			
21	5977624.001	Rod	1			
22	5902436.001	Screw DIN7991-M3x8	10			
23	5977625.001	Cover	1			
24	5902450.001	Screw DIN912-M4x10	10			
25	5918608.001	Cable	1			
26	5551212.001	PCB Sensor	1			

No	Part No.	Description	PU	Note	Serial No.	
					from	to
27	5983279.001	Damper	1			
28	5977629.001	Eccentric	1			
29	5902920.001	Screw ISO7380F-M3x4	10			
30.1	5977601.001	Chassis	1	L		
30.2	5977602.001	Chassis	1	R		
31	5971283.001	Damper	1			
32	6110003.001	Axle	1			
33	5903526.001	E-Ring DIN6799-10	10			
34	5902452.001	Screw DIN912-M4x16	10			
35.1	5977630.001	Pendulum Arm	1	A		
35.2	5977631.001	Pendulum Arm	1	B		
36	5983198.001	Paper Guiding	1			
37.1	6120000.001	Axle	1	C		
37.2	5983197.001	Axle	1	D/H		
37.3	5983271.001	Axle	1	E/I		
37.4	5983276.001	Axle	1	F/J		
38.1	5907559.001	Roller	1	C		
38.2	5907561.001	Belt Roller	1	D/H		
38.3	5907562.001	Belt Roller	1	E/I		
38.4	5907563.001	Belt Roller	1	F/J		
39	5983190.001	Screw	1			
40	5903141.001	Washer DIN988- 17x24x1,0	10	K	E16	
41	5902587.001	Screw DIN7984-M5x16	10	K	E16	
59	6110132.001	Service Kit	1	K	E16	
60	5903099.001	Washer DIN988-12x18x0.2	10			

A	D310
B	D410
Orientation vertical / horizontal	
Working width	
C	V/H 62 mm
D	H 124 mm
E	H 186 mm
F	H 248 mm
G	H 310 mm
H	V 124 mm
I	V 186 mm
J	V 248 mm

K	To exchange item 12 or 32 in devices with a younger time code as E16, order service kit 59
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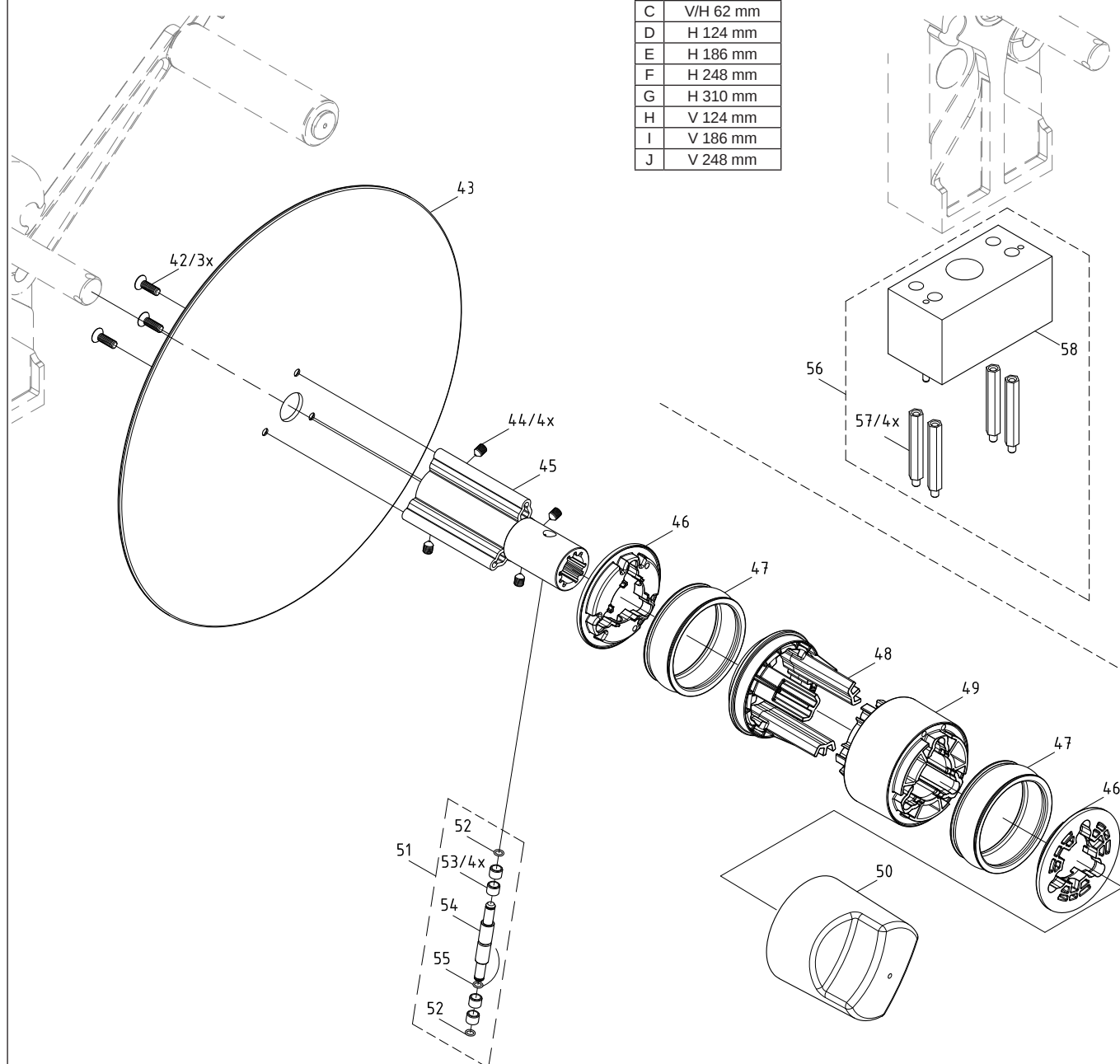


A17.6 Unwinder - Winding Spindle, Disk

No	Part No.	Description	PU	Note	Serial No.	
					from	to
42	5902477.001	Screw DIN7991-M5x16	10			
43.1	5983142.001	Disc	1	A		
43.2	5983133.001	Disc	1	B		
44	5904575.001	Set Screw DIN914-M6x8	10			
45.1	5983140.001	Profile	1	D/C		
45.2	5983138.001	Profile	1	E/H		
45.3	5983136.001	Profile	1	F/I		
45.4	5983131.001	Profile	1	G/J		
46	5971634.001	Washer	1			
47	5971402.001	Clamping Element	1			
48	5971636.001	Slider	1			

No	Part No.	Description	PU	Note	Serial No.	
					from	to
49	5971637.001	Spacer Bushing	1			
50	5983134.001	Handle Assembly	1			
51	5983132.001	Rod	1			
52	5905892.001	O-Ring 4.5x1	10			
53	5907220.001	Plastic Bushing	10			
54	5977714.001	Rod	1			
55	5905570.001	O-Ring 5x1.5	10			
56	5983275.001	Spacer Bushing	1	B		
57	5983269.001	Distance Bolt	1	B		
58	5983270.001	Spacer Bushing	1	B		

A	D310
B	D410
Orientation vertical / horizontal	
Working width	
C	V/H 62 mm
D	H 124 mm
E	H 186 mm
F	H 248 mm
G	H 310 mm
H	V 124 mm
I	V 186 mm
J	V 248 mm



A17.7 Unwinder - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
1	A6		26	5551212.001	PCB Sensor	1							
2	A6		8	5902345.001	Screw DIN7985-M2x12	10							
3	A6		15	5902421.001	Screw DIN7984-M4x10	10							
4	A6		22	5902436.001	Screw DIN7991-M3x8	10							
5	A6		24	5902450.001	Screw DIN912-M4x10	10							
6	A6		34	5902452.001	Screw DIN912-M4x16	10							
7		A7	42	5902477.001	Screw DIN7991-M5x16	10							
8	A6		20	5902582.001	Nut DIN439-M4	10							
9	A6		41	5902587.001	Screw DIN7984-M5x16	10				K	E16		
10	A6		29	5902920.001	Screw ISO7380F-M3x4	10							
11	A6		60	5903099.001	Washer DIN988-12x18x0.2	10							
12	A6		40	5903141.001	Washer DIN988- 17x24x1,0	10				K	E16		
13	A6		11	5903517.001	Snap Ring DIN471-12x1	10							
14	A6		33	5903526.001	E-Ring DIN6799-10	10							
15	A6		13	5903553.001	Snap Ring DIN471-10	10							
16	A6		6	5904122.001	Pin DIN7-3m6x8	10							
17		A7	44	5904575.001	Set Screw DIN914-M6x8	10							
18		A7	55	5905570.001	O-Ring 5x1.5	10							
19		A7	52	5905892.001	O-Ring 4.5x1	10							
20	A6		18	5906302.001	Spring	1		B	C	D			
21	A6		9	5906323.001	Spring	1							
22		A7	53	5907220.001	Plastic Bushing	10							
23	A6		17	5907385.001	Belt	1							
24	A6		10	5907387.001	Spring Bolt	1		B	C	D			
25	A6		38.1	5907559.001	Roller	1				C			
26	A6		38.2	5907561.001	Belt Roller	1		B	C	D	D/H		
27	A6		38.3	5907562.001	Belt Roller	1					E/I		
28	A6		38.4	5907563.001	Belt Roller	1					F/J		
29	A6		25	5918608.001	Cable	1							
30	A6		31	5971283.001	Damper	1							
31		A7	47	5971402.001	Clamping Element	1							
32		A7	46	5971634.001	Washer	1							
33		A7	48	5971636.001	Slider	1							
34		A7	49	5971637.001	Spacer Bushing	1							
35	A6		30.1	5977601.001	Chassis	1				L			
36	A6		30.2	5977602.001	Chassis	1				R			
37	A6		4	5977609.001	Lever	1							
38	A6		7	5977612.001	Pin	10							
39	A6		2	5977613.001	Lever	1							
40	A6		16	5977622.001	Half Shell 1	1							
41	A6		19	5977623.001	Half Shell 2	1							
42	A6		21	5977624.001	Rod	1							
43	A6		23	5977625.001	Cover	1		B	C	D			
44	A6		28	5977629.001	Eccentric	1							
45	A6		35.1	5977630.001	Pendulum Arm	1				A			
46	A6		35.2	5977631.001	Pendulum Arm	1				B			
47	A6		1	5977632.001	Pendulum Axle	1							
48	A6		14	5977633.001	Brake Lever	1							
49		A7	54	5977714.001	Rod	1							
50		A7	45.4	5983131.001	Profile	1				G/J			
51		A7	51	5983132.001	Rod	1							
52		A7	43.2	5983133.001	Disc	1				B			
53		A7	50	5983134.001	Handle Assembly	1		B	C	D			
54		A7	45.3	5983136.001	Profile	1		B	C	D	F/I		

PU Package unit

Note

A Diameter 310 mm
 B Diameter 410 mm
 C Working width 62 mm vertical/horizontal
 D Working width 124 mm horizontal
 E Working width 186 mm horizontal
 F Working width 248 mm horizontal
 G Working width 310 mm horizontal

H Working width 124 mm vertical
 I Working width 186 mm vertical
 J Working width 248 mm vertical
 K To exchange item 12 or 32 in devices with a younger time code as E16, order service kit 59

SPR Recommendation

A - wearing parts and accessories
 B - recommended spare parts for quick repair
 C - recommended spare parts for distributors
 D - recommended spare parts for central stores

A17.7 Unwinder - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
55		A7	45.2	5983138.001	Profile	1					E/H		
56		A7	45.1	5983140.001	Profile	1					D/C		
57		A7	43.1	5983142.001	Disc	1					A		
58	A6		39	5983190.001	Screw	1							
59	A6		37.2	5983197.001	Axle	1					D/H		
60	A6		36	5983198.001	Paper Guiding	1							
61	A6		3	5983266.001	Lever 1	1							
62	A6		5	5983267.001	Lever 2	1		B	C	D			
63		A7	57	5983269.001	Distance Bolt	1					B		
64		A7	58	5983270.001	Spacer Bushing	1					B		
65	A6		37.3	5983271.001	Axle	1		B	C	D	E/I		
66		A7	56	5983275.001	Spacer Bushing	1		B	C	D	B		
67	A6		37.4	5983276.001	Axle	1					F/J		
68	A6		27	5983279.001	Damper	1							
69	A6		32	6110003.001	Axle	1					K	E16	
70	A6		12	6110004.001	Brake Disk	1					K	E16	
71	A6		59	6110132.001	Service Kit	1					K	E16	
72	A6		37.1	6120000.001	Axle	1					C		

PU Package unit

Note

SPR Recommendation

A - wearing parts and accessories

B - recommended spare parts for quick repair

C - recommended spare parts for distributors

D - recommended spare parts for central stores

A Diameter 310 mm

B Diameter 410 mm

C Working width 62 mm vertical/horizontal

D Working width 124 mm horizontal

E Working width 186 mm horizontal

F Working width 248 mm horizontal

G Working width 310 mm horizontal

H Working width 124 mm vertical

I Working width 186 mm vertical

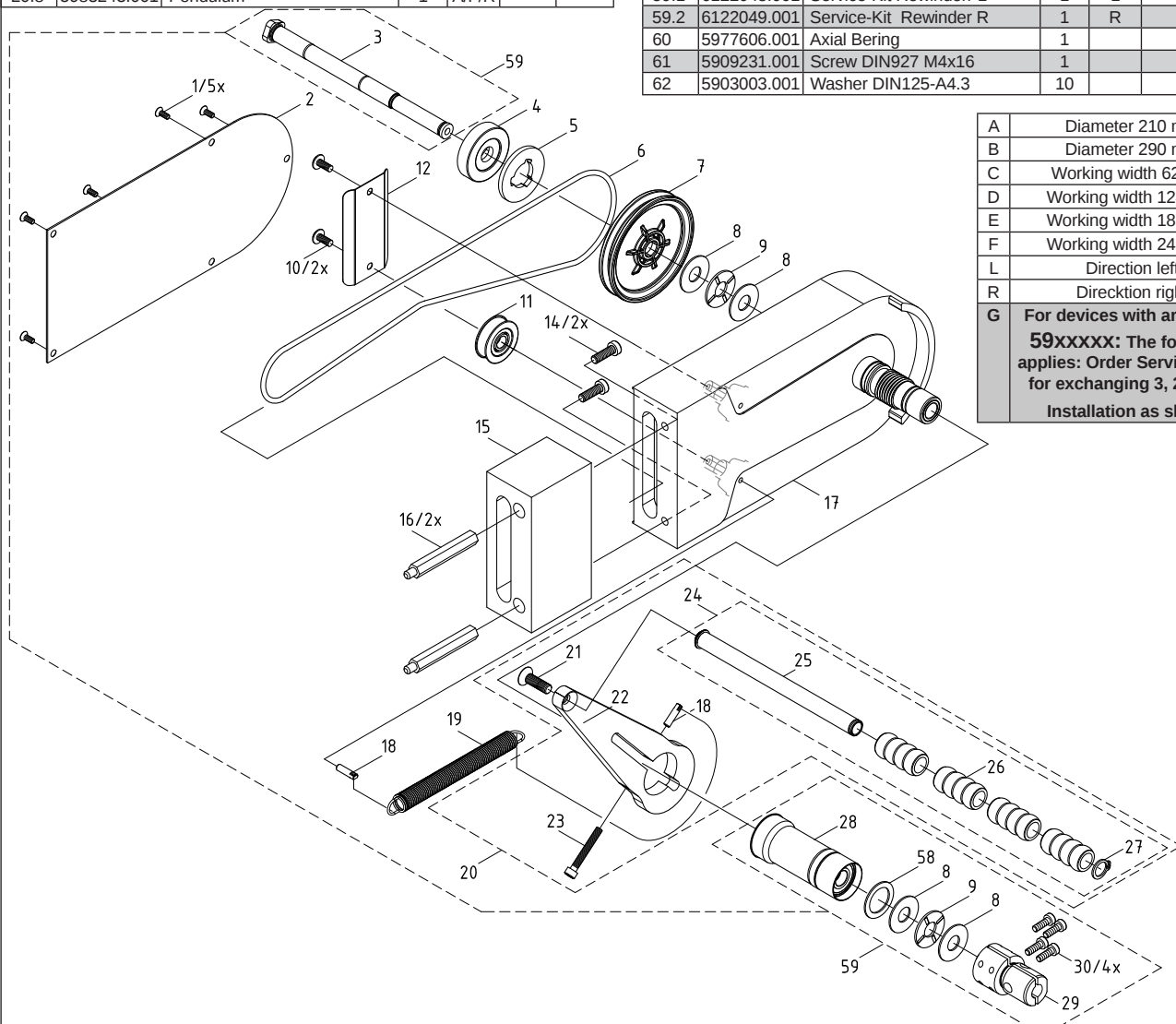
J Working width 248 mm vertical

K	To exchange item 12 or 32 in devices with a younger time code as E16, order service kit 59
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A17.8 Rewinder - Chassis, Pendulum

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902436.001	Screw DIN7991-M3x8	10			
2	5977625.001	Cover	1			
3	6122051.001	Axle	1	G		
4	5983264.001	Friction Disc	1			
5	5970959.001	Friction Surface	1			
6.1	5906328.001	Round Belt 5,0x585	1	A		
6.2	5906331.001	Round Belt 5,0x680	1	B		
7	5970957.001	Gear	1			
8	5901162.001	Washer	1			
9	5901161.001	Needle Ring	1			
10	5902918.001	Screw ISO7380F-M4x10	10			
11	5971292.001	Gear	1			
12	6110006.001	Protective Plate	1			
14	5902587.001	Screw DIN7984-M5x16	10			
15	5983285.001	Spacer Bushing	1			
16	5983269.001	Distance Bolt	1			
17.1	5970970.001	Chassis	1	L		
17.2	5983227.001	Chassis	1	R		
18	5907387.001	Spring Bolt	1			
19	5906317.001	Spring	1			
20.1	6122060.001	Pendulum	1	A/C/L		
20.2	5970940.001	Pendulum	1	A/D/L		
20.3	5983240.001	Pendulum	1	A/E/L		
20.4	5983242.001	Pendulum	1	A/F/L		
20.5	6122061.001	Pendulum	1	A/C/R		
20.6	5983229.001	Pendulum	1	A/D/R		
20.7	5983241.001	Pendulum	1	A/E/R		
20.8	5983243.001	Pendulum	1	A/F/R		

No	Part No.	Description	PU	Note	Time code	
					from	to
20.9	6122062.001	Pendulum	1	B/C/L		
20.10	5983244.001	Pendulum	1	B/D/L		
20.11	5983246.001	Pendulum	1	B/E/L		
20.12	5983248.001	Pendulum	1	B/F/L		
20.13	6122063.001	Pendulum	1	B/C/R		
20.14	5983245.001	Pendulum	1	B/D/R		
20.15	5983247.001	Pendulum	1	B/E/R		
20.16	5983249.001	Pendulum	1	B/F/R		
21	5902899.001	Screw DIN7991-M6x20	10			
22.1	5970939.001	Pendulum	1	A		
22.2	5983239.001	Pendulum	1	B		
23	5902446.001	Screw DIN912-M4x30	10			
24.1	6122059.001	Pendulum	1	C		
24.2	5970934.001	Pendulum Axle	1	D		
24.3	5983233.001	Pendulum Axle	1	E		
24.4	5983236.001	Pendulum Axle	1	F		
25.1	6122058.001	Pendulum	1	C		
25.2	5970941.001	Pendulum Axle	1	D		
25.3	5983234.001	Pendulum Axle	1	E		
25.4	5983237.001	Pendulum Axle	1	F		
26	6111001.001	Roller	1			
27	5903553.001	Snap Ring DIN471-10	10			
28.1	6122053.001	Bracket	1	L/G		
28.2	6122055.001	Bracket	1	R/G		
29	6122056.001	Axle	1	G		
30	5902836.001	Screw DIN7984-M4x12	10			
58	5903141.001	Washer DIN988- 17x24x1,0	10			
59.1	6122048.001	Service-Kit Rewinderr L	1	L		
59.2	6122049.001	Service-Kit Rewinder R	1	R		
60	5977606.001	Axial Bering	1			
61	5909231.001	Screw DIN927 M4x16	1			
62	5903003.001	Washer DIN125-A4.3	10			



A	Diameter 210 mm
B	Diameter 290 mm
C	Working width 62 mm
D	Working width 124 mm
E	Working width 186 mm
F	Working width 248 mm
L	Direction left
R	Direction right
G	For devices with article no. 59xxxxx: The following applies: Order Service Kit 59 for exchanging 3, 28 or 29 Installation as shown

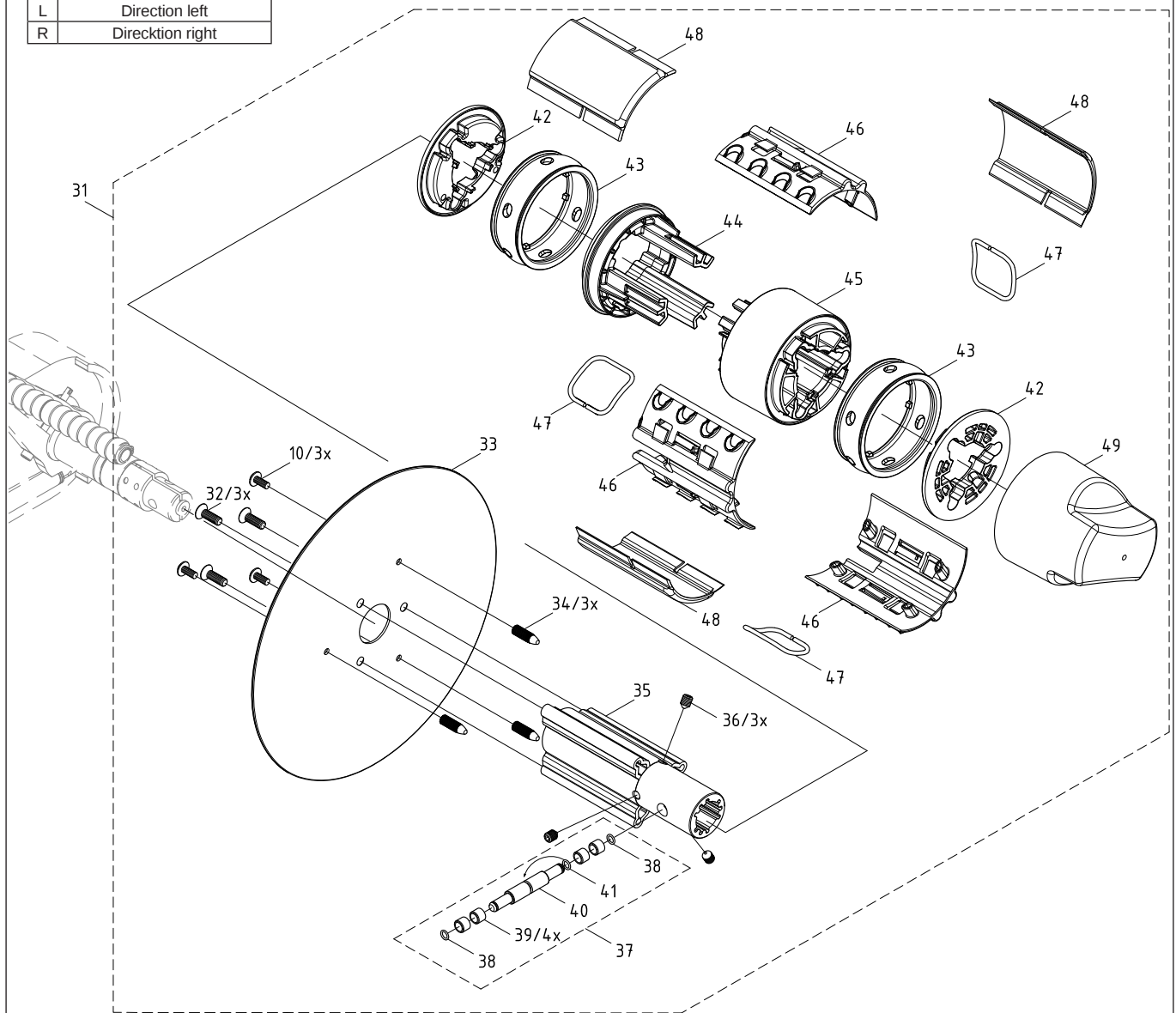
A17 Spare parts

A11

A17.9 Rewinder - Winding Spindle

No	Part No.	Description	PU	Note	Time code	
					from	to
10	5902918.001	Screw ISO7380F-M4x10	10			
31.1	5983159.001	Winding Spindle	1	A/C/D		
31.2	5983158.001	Winding Spindle	1	A/E		
31.3	5983157.001	Winding Spindle	1	A/F		
31.4	5983153.001	Winding Spindle	1	B/C/D		
31.5	5983151.001	Winding Spindle	1	B/E		
31.6	5983149.001	Winding Spindle	1	B/F		
32	5902477.001	Screw DIN7991-M5x16	10			
33.1	5983156.001	Disk	1	A		
33.2	5983147.001	Disk	1	B		
34	5971632.001	Spindle	1			
35.1	5983154.001	Profile	1	C/D		
35.2	5983152.001	Profile	1	E		
35.3	5983150.001	Profile	1	F		
36	5904575.001	Set Screw DIN914-M6x8	10			
37	5983132.001	Rod	1			
38	5905892.001	O-Ring 4.5x1	10			
39	5907220.001	Plastic Bushing	10			
40	5977714.001	Rod	1			
41	5905570.001	O-Ring 5x1.5	10			
42	5971634.001	Washer	1			
43	5977724.001	Clamping Element	1			
44	5971636.001	Slider	1			
45	5971637.001	Spacer Bushing	1			
46.1	5983295.001	Shell	1	C/D		
46.2	5983296.001	Shell	1	E		
46.3	5983297.001	Shell	1	F		
47	5906336.001	Spring	1			
48.1	5983356.001	Cover	1	C/D		
48.2	5983357.001	Cover	1	E		
48.3	5983358.001	Cover	1	F		
49	5983134.001	Handle Assembly	1			
40	5904575.001	Set Screw DIN914-M6x8	10			
49	5983134.001	Handle Assembly	1			

A	Diameter 210 mm
B	Diameter 290 mm
C	Working width 62 mm
D	Working width 124 mm
E	Working width 186 mm
F	Working width 248 mm
L	Direction left
R	Direction right



A17.10 Rewinder - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
1	A10		9	5901161.001	Needle Ring	1							
2	A10		8	5901162.001	Washer	1							
3	A10		1	5902436.001	Screw DIN7991-M3x8	10							
4	A10		23	5902446.001	Screw DIN912-M4x30	10							
5		A11	32	5902477.001	Screw DIN7991-M5x16	10							
6	A10		14	5902587.001	Screw DIN7984-M5x16	10							
7	A10		30	5902836.001	Screw DIN7984-M4x12	10							
8	A10		21	5902899.001	Screw DIN7991-M6x20	10							
9	A10	A11	10	5902918.001	Screw ISO7380F-M4x10	10							
10	A10		62	5903003.001	Washer DIN125-A4.3	10							
11	A10		58	5903141.001	Washer DIN988- 17x24x1,0	10							
12	A10		27	5903553.001	Snap Ring DIN471-10	10							
13		A11	36	5904575.001	Set Screw DIN914-M6x8	10							
14		A11	41	5905570.001	O-Ring 5x1.5	10							
15		A11	38	5905892.001	O-Ring 4.5x1	10							
16	A10		19	5906317.001	Spring	1							
17	A10		6.1	5906328.001	Round Belt 5,0x585	1					A		
18	A10		6.2	5906331.001	Round Belt 5,0x680	1					B		
19		A11	47	5906336.001	Spring	1							
20		A11	39	5907220.001	Plastic Bushing	10							
21	A10		18	5907387.001	Spring Bolt	1							
22	A10		24.2	5970934.001	Pendulum Axle	1					D		
23	A10		22.1	5970939.001	Pendulum	1					A		
24	A10		20.2	5970940.001	Pendulum	1					A/D/L		
25	A10		25.2	5970941.001	Pendulum Axle	1					D		
26	A10		7	5970957.001	Gear	1							
27	A10		5	5970959.001	Friction Surface	1							
28	A10		17.1	5970970.001	Chassis	1					L		
29	A10		11	5971292.001	Gear	1							
30	A10		60	5977606.001	Axial Bearing	1							
31		A11	34	5971632.001	Spindle	1							
32		A11	42	5971634.001	Washer	1							
33		A11	44	5971636.001	Slider	1							
34		A11	45	5971637.001	Spacer Bushing	1							
35	A10		2	5977625.001	Cover	1							
36		A11	40	5977714.001	Rod	1							
37		A11	43	5977724.001	Clamping Element	1							
38		A11	37	5983132.001	Rod	1							
39		A11	49	5983134.001	Handle Assembly	1							
40		A11	33.2	5983147.001	Disk	1					B		
41		A11	31.6	5983149.001	Winding Spindle	1					B/F		
42		A11	35.3	5983150.001	Profile	1					F		
43		A11	31.5	5983151.001	Winding Spindle	1					B/E		
44		A11	35.2	5983152.001	Profile	1					E		
45		A11	31.4	5983153.001	Winding Spindle	1					B/C/D		
46		A11	35.1	5983154.001	Profile	1					C/D		
47		A11	33.1	5983156.001	Disk	1					A		
48		A11	31.3	5983157.001	Winding Spindle	1					A/F		
49		A11	31.2	5983158.001	Winding Spindle	1					A/E		
50		A11	31.1	5983159.001	Winding Spindle	1					A/C/D		
51	A10		17.2	5983227.001	Chassis	1					R		
52	A10		20.6	5983229.001	Pendulum	1					A/D/R		
53	A10		24.3	5983233.001	Pendulum Axle	1					E		
54	A10		25.3	5983234.001	Pendulum Axle	1					E		

PU Package unit

Notes

A Diameter 210 mm
 B Diameter 290 mm
 C Working width 124 mm
 D Working width 186 mm
 E Working width 248 mm
 L Direction left
 R Direction right

SPR Recommendation

A - wearing parts and accessories
 B - recommended spare parts for quick repair
 C - recommended spare parts for distributors
 D - recommended spare parts for central stores

G For devices with article no. 59xxxxx: The following applies: Order Service Kit 59 for exchanging 3, 28 or 29 Installation as shown

A17.10 Rewinder - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
55	A10		24.4	5983236.001	Pendulum Axle	1					F		
56	A10		25.4	5983237.001	Pendulum Axle	1					F		
57	A10		22.2	5983239.001	Pendulum	1					B		
58	A10		20.3	5983240.001	Pendulum	1					A/E/L		
59	A10		20.7	5983241.001	Pendulum	1					A/E/R		
60	A10		20.4	5983242.001	Pendulum	1					A/F/L		
61	A10		20.8	5983243.001	Pendulum	1					A/F/R		
62	A10		20.10	5983244.001	Pendulum	1					B/D/L		
63	A10		20.14	5983245.001	Pendulum	1					B/D/R		
64	A10		20.11	5983246.001	Pendulum	1					B/E/L		
65	A10		20.15	5983247.001	Pendulum	1					B/E/R		
66	A10		20.12	5983248.001	Pendulum	1					B/F/L		
67	A10		20.16	5983249.001	Pendulum	1					B/F/R		
68	A10		4	5983264.001	Friction Disc	1							
69	A10		16	5983269.001	Distance Bolt	1							
70	A10		15	5983285.001	Spacer Bushing	1							
71		A11	46.1	5983295.001	Shell	1					C/D		
72		A11	46.2	5983296.001	Shell	1					E		
73		A11	46.3	5983297.001	Shell	1					F		
74		A11	48.1	5983356.001	Cover	1					C/D		
75		A11	48.2	5983357.001	Cover	1					E		
76		A11	48.3	5983358.001	Cover	1					F		
77	A10		12	6110006.001	Protective Plate	1							
78	A10		26	6111001.001	Roller	1							
79	A10		59.1	6122048.001	Service-Kit Rewinderr L	1					L		
80	A10		59.2	6122049.001	Service-Kit Rewinder R	1					R		
81	A10		3	6122051.001	Axle	1					G		
82	A10		28.1	6122053.001	Bracket	1					L/G		
83	A10		28.2	6122055.001	Bracket	1					R/G		
84	A10		29	6122056.001	Axle	1					G		
85	A10		25.1	6122058.001	Pendulum	1					C		
86	A10		24.1	6122059.001	Pendulum	1					C		
87	A10		20.1	6122060.001	Pendulum	1					A/C/L		
88	A10		20.5	6122061.001	Pendulum	1					A/C/R		
89	A10		20.9	6122062.001	Pendulum	1					B/C/L		
90	A10		20.13	6122063.001	Pendulum	1					B/C/R		

PU Package unit

Notes

SPR Recommendation

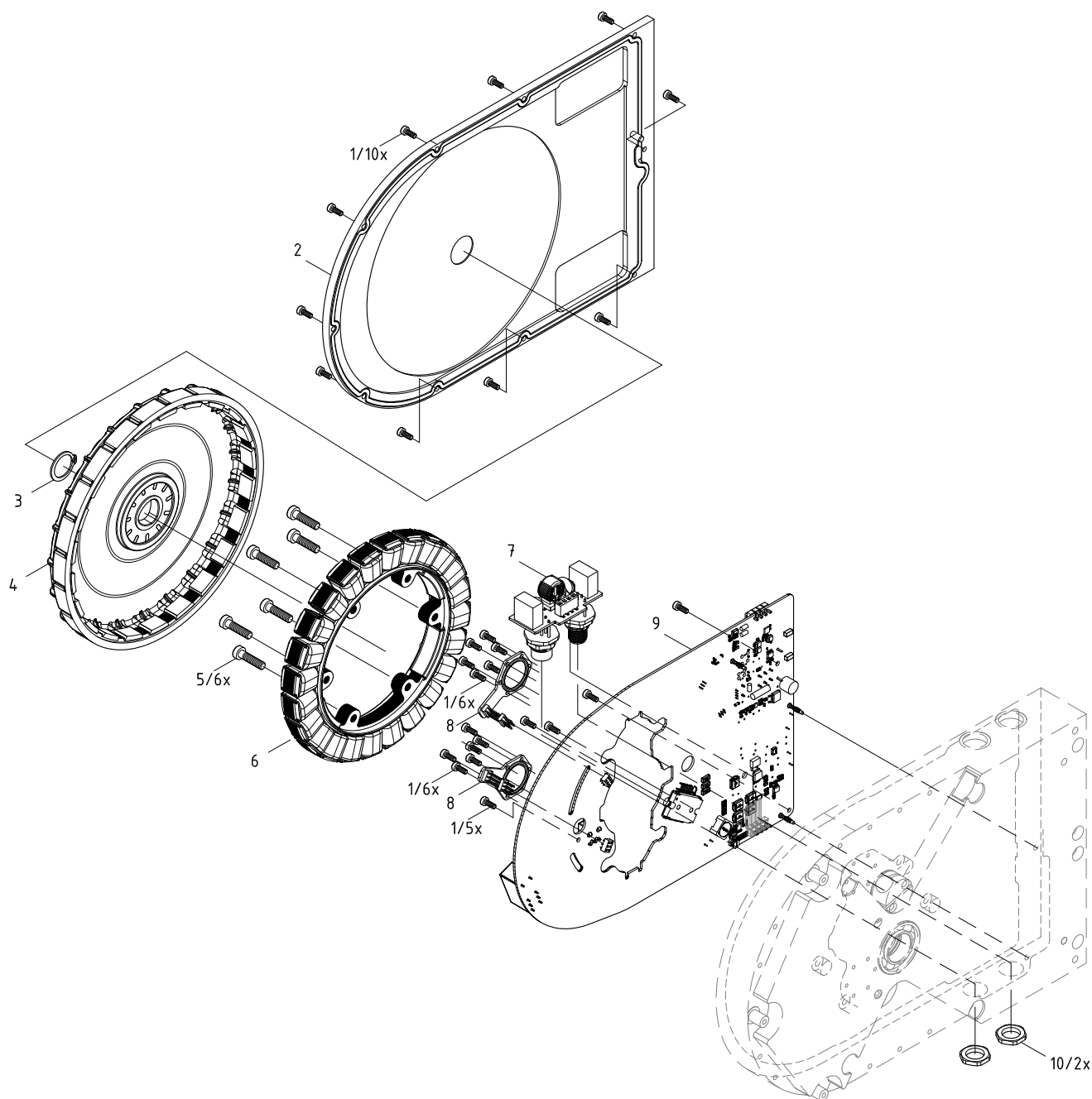
- A - wearing parts and accessories
- B - recommended spare parts for quick repair
- C - recommended spare parts for distributors
- D - recommended spare parts for central stores

- A Diameter 210 mm
- B Diameter 290 mm
- C Working width 124 mm
- D Working width 186 mm
- E Working width 248 mm
- L Direction left
- R Direction right

G For devices with article no. 59xxxxx: The following applies:
Order Service Kit 59 for exchanging 3, 28 or 29
Installation as shown

A17.11 Motor-driven unwinder - Motor, Electronics

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902951.001	Screw DIN7984 M3x8	10			
2	5971302.001	Cover	1			
3	5903538.001	Snap Ring DIN471 17x1	10			
4	5983439.001	Rotor	1			
5	5902282.001	Screw DIN7984-M5x20	10			
6	5983438.001	Stator	1			
7	5551337.001	PCB Winder Power I/O	1			
8	5550214.001	PCB Winder Dancer	1			
9	5977722.001	PCB Winder	1			
10	5918728.001	Nut M12	10			

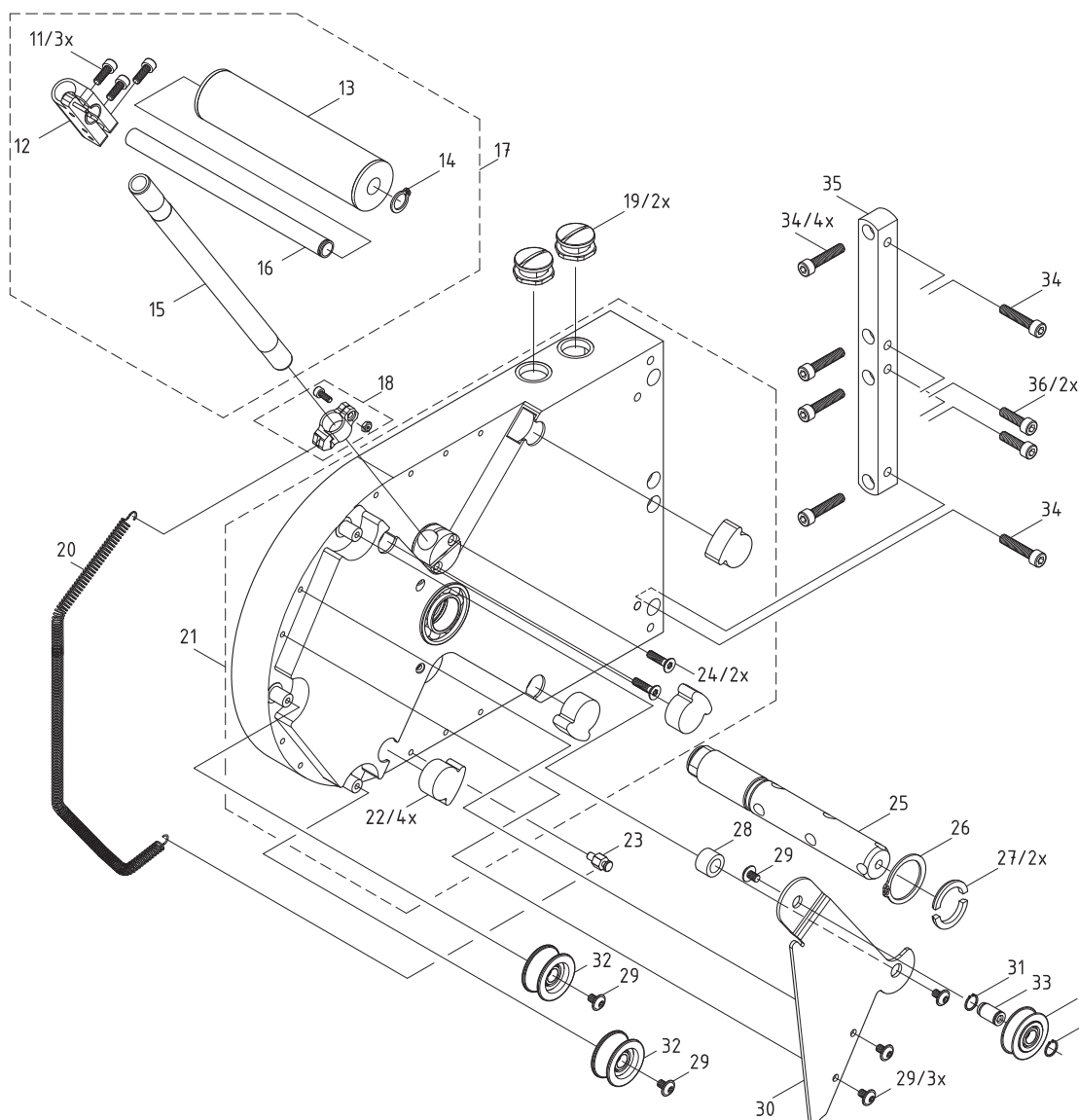


A17.12 Motor-driven unwinder - Chassis, Guiding

No	Part No.	Description	PU	Note	Time code	
					from	to
11	5902428.001	Screw DIN912 M4x12	10			
12	6127690.001	Binder	1			
13.1	5907561.001	Belt Roller	1	C		
13.2	5907562.001	Belt Roller	1	D		
13.3	5907563.001	Belt Roller	1	E		
13.4	5907564.001	Belt Roller	1	F		
14	5903553.001	Snap Ring DIN471-10	10			
15.1	6127694.001	Tube D410	1	A		
15.2	6127695.001	Tube D510	1	B		
16.1	6127622.001	Tube	1	C		
16.2	6127623.001	Tube	1	D		
16.3	6127624.001	Tube	1	E		
16.4	6127625.001	Tube	1	F		
17.1	6127233.001	Pendulum Arm D410 124	1	A/C		
17.2	6127234.001	Pendulum Arm D410 186	1	A/D		
17.3	6127235.001	Pendulum Arm D410 248	1	A/E		
17.4	6127236.001	Pendulum Arm D410 310	1	A/F		
17.5	6127239.001	Pendulum Arm D510 124	1	B/C		
17.6	6127240.001	Pendulum Arm D510 186	1	B/D		
17.7	6127241.001	Pendulum Arm D510 248	1	B/E		
18	5977640.001	Bracket	1			
19	5907513.001	Covering Cap M16x1.5	1			

No	Part No.	Description	PU	Note	Time code	
					from	to
20.1	5906355.001	Tension Spring	1	A		
20.2	5906358.001	Tension Spring	1	B		
21.1	6130000.001	Chassis	1	L		
21.2	6130008.001	Chassis	1	R		
22	5971283.001	Damper	1			
23	6127192.001	Bolt	1			
24	5902941.001	Screw ISO14581-M4x16	10			
25	5975804.001	Spindle	1			
26	5903571.001	Snap Ring DIN471 25x1,2	10			
27	5975805.001	Half-Shell	1			
28	6127196.001	Distance Bush	1			
29	5902936.001	Screw ISO 7380F M4x6	10			
30.1	6122070.001	Plate	1	L/A		
30.2	6122071.001	Plate	1	R/A		
30.3	6122072.001	Plate	1	L/B		
30.4	6122073.001	Plate	1	R/B		
31	5903567.001	Snap Ring DIN471-8x1	10			
32	6122065.001	Gear	1			
33	6127197.001	Thread Ledge	1			
34	5902455.001	Screw DIN912 M5x25	10			
35	5983166.001	Strip	1			

L	L version
R	R version
A	D410
B	D510
Working width	
C	124 mm
D	186 mm
E	248 mm
F	310 mm
G	372 mm

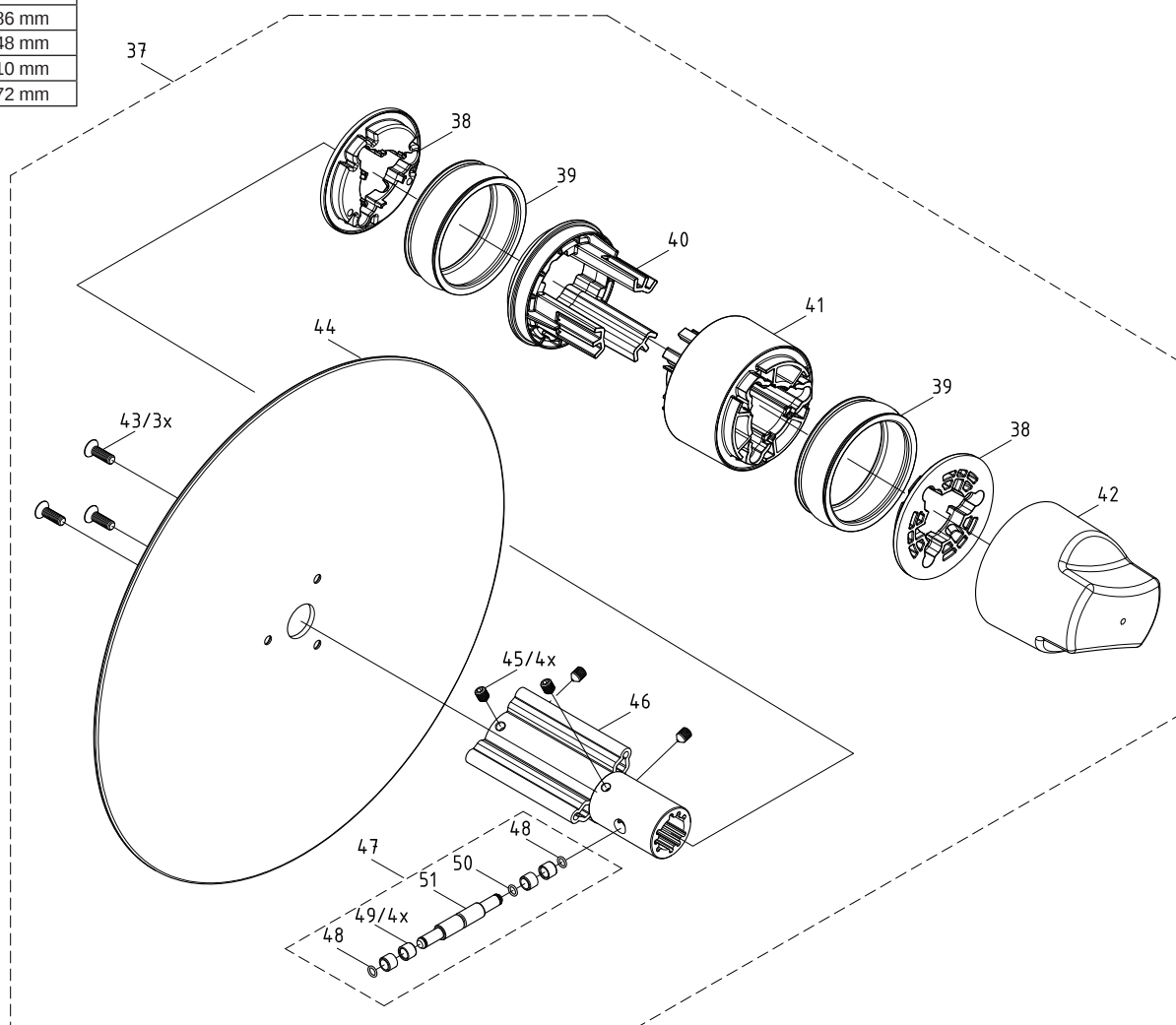


A17.13 Motor-driven unwinder - Winding Spindle

No	Part No.	Description	PU	Note	Time code	
					from	to
37.1	5983139.001	Winding Spindle	1	A/C		
37.2	5983137.001	Winding Spindle	1	A/D		
37.3	5983135.001	Winding Spindle	1	A/E		
37.4	5983130.001	Winding Spindle	1	A/F		
37.5	6127213.001	Winding Spindle	1	A/G		
37.6	6127214.001	Winding Spindle	1	B/C		
37.7	6127215.001	Winding Spindle	1	B/D		
37.8	6127216.001	Winding Spindle	1	B/E		
37.9	6127217.001	Winding Spindle	1	B/F		
38	5971634.001	Washer	1			
39	5971402.001	Clamping Element	1			
40	5971636.001	Slider	1			
41	5971637.001	Spacer Bushing	1			
42	5983134.001	Handle Assembly	1			

No	Part No.	Description	PU	Note	Time code	
					from	to
43	5902477.001	Screw DIN7991-M5x16	10			
44.1	5983133.001	Disc	1	A		
44.2	5983500.001	Disc	1	B		
45	5904575.001	Set Screw DIN914-M6x8	10			
46.1	5983140.001	Profile	1	C		
46.2	5983138.001	Profile	1	D		
46.3	5983136.001	Profile	1	E		
46.4	5983131.001	Profile	1	F		
46.5	6127212.001	Profile	1	G		
47	5983132.001	Rod	1			
48	5905892.001	O-Ring 4.5x1	10			
49	5907220.001	Plastic Bushing	10			
50	5905570.001	O-Ring 5x1.5	10			
51	5977714.001	Rod	1			

L	L version
R	R version
A	D410
B	D510
Working width	
C	124 mm
D	186 mm
E	248 mm
F	310 mm
G	372 mm



A17.14 Motor-driven unwinder - Spare Parts Index

Pos.	Figure/Page			No.	Part No.	Description	PU	SPR				Notes	Time code	
													from	to
1	A14			8	5550214.001	PCB Winder Dancer	1							
2	A14			7	5551337.001	PCB Winder Power I/O	1							
3	A14			5	5902282.001	Screw DIN7984-M5x20	10							
4		A15		11	5902428.001	Screw DIN912 M4x12	10							
5		A15		36	5902454.001	Screw DIN912 M5x18	10							
6		A15		34	5902455.001	Screw DIN912 M5x25	10							
7			A16	43	5902477.001	Screw DIN7991-M5x16	10							
8		A15		29	5902936.001	Screw ISO 7380F M4x6	10							
9		A15		24	5902941.001	Screw ISO14581-M4x16	10							
10	A14			1	5902951.001	Screw DIN7984 M3x8	10							
11	A14			3	5903538.001	Snap Ring DIN471 17x1	10							
12		A15		14	5903553.001	Snap Ring DIN471-10	10							
13		A15		31	5903567.001	Snap Ring DIN471-8x1	10							
14		A15		26	5903571.001	Snap Ring DIN471 25x1,2	10							
15			A16	45	5904575.001	Set Screw DIN914-M6x8	10							
16			A16	50	5905570.001	O-Ring 5x1.5	10							
17			A16	48	5905892.001	O-Ring 4.5x1	10							
18		A15		20.1	5906355.001	Tension Spring	1					A		
19		A15		20.2	5906358.001	Tension Spring	1					B		
20			A16	49	5907220.001	Plastic Bushing	10							
21		A15		19	5907513.001	Covering Cap M16x1.5	1							
22		A15		13.1	5907561.001	Belt Roller	1					C		
23		A15		13.2	5907562.001	Belt Roller	1					D		
24		A15		13.3	5907563.001	Belt Roller	1					E		
25		A15		13.4	5907564.001	Belt Roller	1					F		
26	A14			10	5918728.001	Nut M12	10							
27		A15		22	5971283.001	Damper	1							
28	A14			2	5971302.001	Cover	1							
29			A16	39	5971402.001	Clamping Element	1							
30			A16	38	5971634.001	Washer	1							
31			A16	40	5971636.001	Slider	1							
32			A16	41	5971637.001	Spacer Bushing	1							
33		A15		25	5975804.001	Spindle	1							
34		A15		27	5975805.001	Half-Shell	1							
35		A15		18	5977640.001	Bracket	1							
36			A16	51	5977714.001	Rod	1							
37	A14			9	5977722.001	PCB Winder	1							
38			A16	37.4	5983130.001	Winding Spindle	1					A/F		
39			A16	46.4	5983131.001	Profile	1					F		
40			A16	47	5983132.001	Rod	1							
41			A16	44.1	5983133.001	Disc	1					A		
42			A16	42	5983134.001	Handle Assembly	1							
43			A16	37.3	5983135.001	Winding Spindle	1					A/E		
44			A16	46.3	5983136.001	Profile	1					E		
45			A16	37.2	5983137.001	Winding Spindle	1					A/D		
46			A16	46.2	5983138.001	Profile	1					D		
47			A16	37.1	5983139.001	Winding Spindle	1					A/C		
48			A16	46.1	5983140.001	Profile	1					C		
49		A15		35	5983166.001	Strip	1							
50	A14			6	5983438.001	Stator	1							
51	A14			4	5983439.001	Rotor	1							
52			A16	44.2	5983500.001	Disc	1					B		
53		A15		32	6122065.001	Gear	1							
54		A15		30.1	6122070.001	Plate	1					L/A		
55		A15		30.2	6122071.001	Plate	1					R/A		
56		A15		30.3	6122072.001	Plate	1					L/B		

PU Package unit

Notes

L L version
R R version
A D410
B D510

C Working width 124 mm
D Working width 186 mm
E Working width 248 mm
F Working width 310 mm
G Working width 372 mm

SPR Recommendation

A - wearing parts and accessories
B - recommended spare parts for quick repair
C - recommended spare parts for distributors
D - recommended spare parts for central stores

A17.14 Motor-driven unwinder - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
57		A15	30.4	6122073.001	Plate	1					R/B		
58		A15	23	6127192.001	Bolt	1							
59		A15	28	6127196.001	Distance Bush	1							
60		A15	33	6127197.001	Thread Ledge	1							
61			A16	46.5	6127212.001	Profile	1				G		
62			A16	37.5	6127213.001	Winding Spindle	1				A/G		
63			A16	37.6	6127214.001	Winding Spindle	1				B/C		
64			A16	37.7	6127215.001	Winding Spindle	1				B/D		
65			A16	37.8	6127216.001	Winding Spindle	1				B/E		
66			A16	37.9	6127217.001	Winding Spindle	1				B/F		
67		A15	17.1	6127233.001	Pendulum Arm D410 124	1					A/C		
68		A15	17.2	6127234.001	Pendulum Arm D410 186	1					A/D		
69		A15	17.3	6127235.001	Pendulum Arm D410 248	1					A/E		
70		A15	17.4	6127236.001	Pendulum Arm D410 310	1					A/F		
71		A15	17.5	6127239.001	Pendulum Arm D510 124	1					B/C		
72		A15	17.6	6127240.001	Pendulum Arm D510 186	1					B/D		
73		A15	17.7	6127241.001	Pendulum Arm D510 248	1					B/E		
74		A15	16.1	6127622.001	Tube	1					C		
75		A15	16.2	6127623.001	Tube	1					D		
76		A15	16.3	6127624.001	Tube	1					E		
77		A15	16.4	6127625.001	Tube	1					F		
78		A15	12	6127690.001	Binder	1							
79		A15	15.1	6127694.001	Tube D410	1					A		
80		A15	15.2	6127695.001	Tube D510	1					B		
81		A15	21.1	6130000.001	Chassis	1					L		
82		A15	21.2	6130008.001	Chassis	1					R		

PU Package unit

Notes

L L version
R R version
A D410
B D510

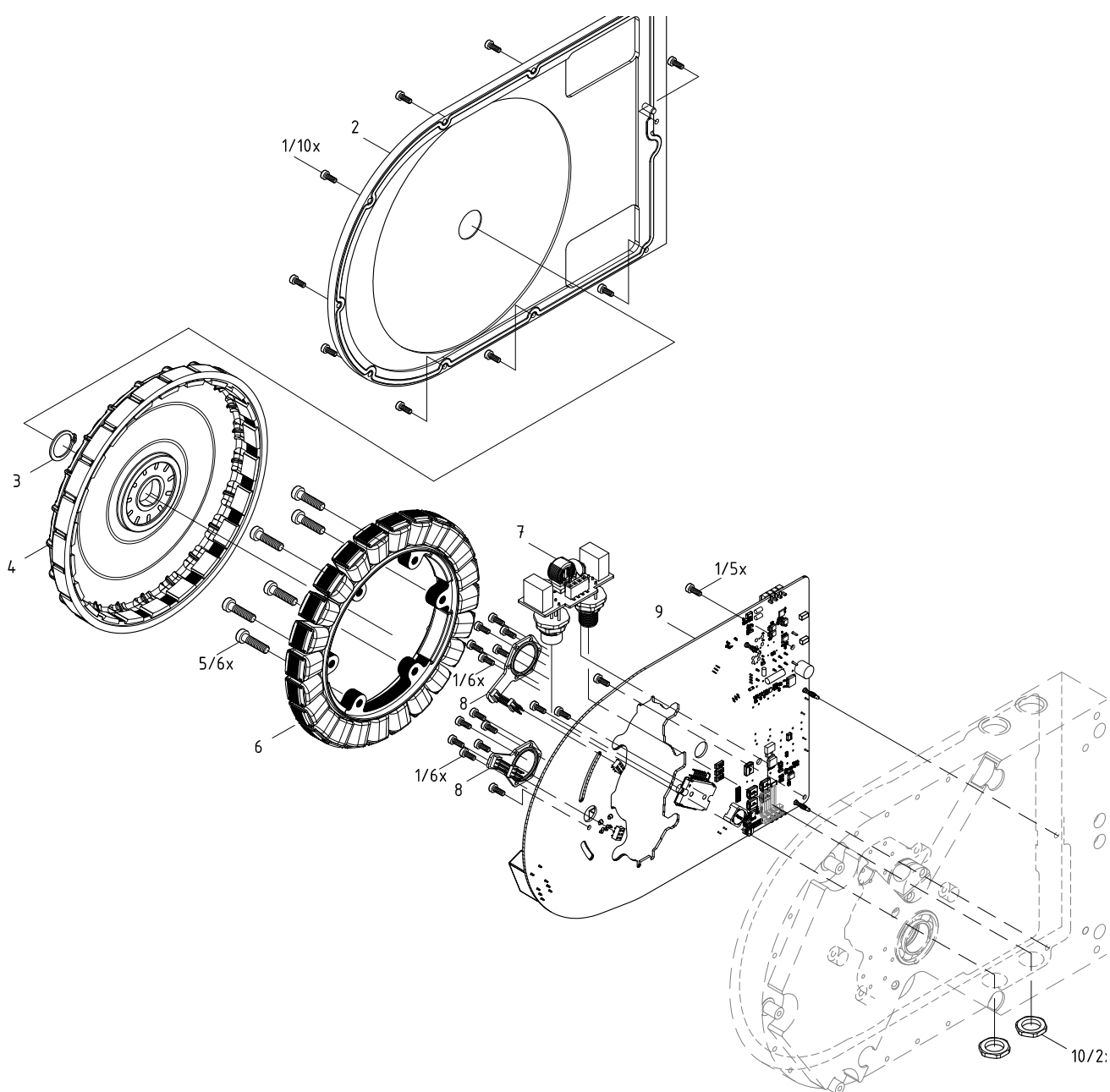
C Working width 124 mm
D Working width 186 mm
E Working width 248 mm
F Working width 310 mm
G Working width 372 mm

SPR Recommendation

A - wearing parts and accessories
B - recommended spare parts for quick repair
C - recommended spare parts for distributors
D - recommended spare parts for central stores

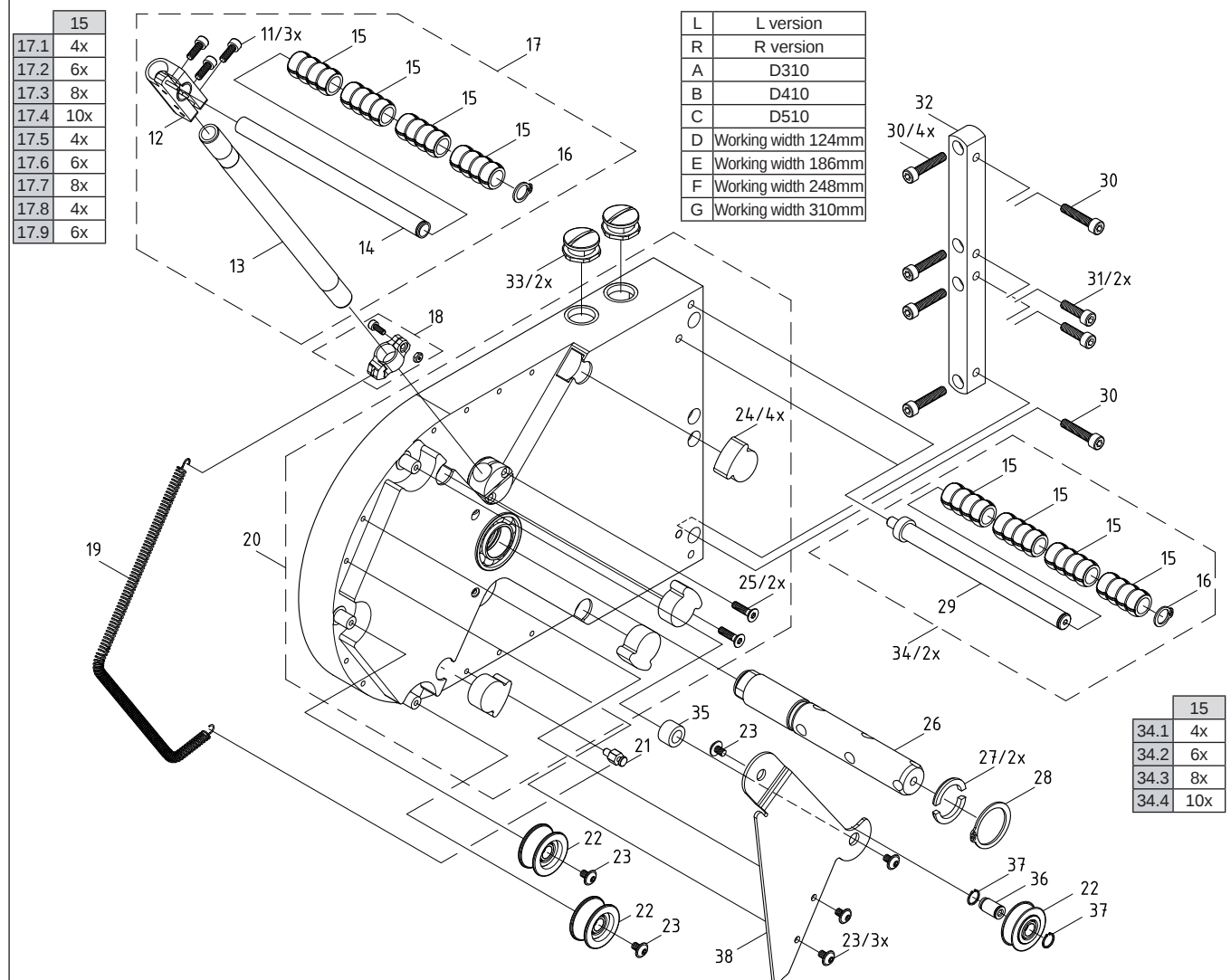
A17.15 Motor-driven rewinder - Motor, Electronics

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902951.001	Screw DIN7984 M3x8	10			
2	5971302.001	Cover	1			
3	5903538.001	Snap Ring DIN471 17x1	10			
4	5983439.001	Rotor	1			
5	5902282.001	Screw DIN7984-M5x20	10			
6	5983438.001	Stator	1			
7	5551337.001	PCB Winder Power I/O	1			
8	5550214.001	PCB Winder Dancer	1			
9	5977722.001	PCB Winder	1			
10	5918728.001	Nut M12	10			



A17.16 Motor-driven rewinder - Chassis, Guiding

No	Part No.	Description	PU	Note	Serial No.	
					from	to
11	5902428.001	Screw DIN912 M4x12	10			
12	6127690.001	Binder	1			
13.1	6127691.001	Tube D310	1	A		
13.2	6127692.001	Tube D410	1	B		
13.3	6127693.001	Tube D510	1	C		
14.1	6127103.001	Tube 124	1	D		
14.2	6127104.001	Tube 186	1	E		
14.3	6127105.001	Tube 248	1	F		
14.4	6127106.001	Tube 310	1	G		
15	6111001.001	Roller	1			
16	5903553.001	Snap Ring DIN471-10	10			
17.1	6127258.001	Pendulum Arm D310 124	1	A/D		
17.2	6127259.001	Pendulum Arm D310 186	1	A/E		
17.3	6127260.001	Pendulum Arm D310 248	1	A/F		
17.4	6127261.001	Pendulum Arm D310 310	1	A/G		
17.5	6127262.001	Pendulum Arm D410 124	1	B/D		
17.6	6127263.001	Pendulum Arm D410 186	1	B/E		
17.7	6127264.001	Pendulum Arm D410 248	1	B/F		
17.8	6127265.001	Pendulum Arm D510 124	1	C/D		
17.9	6127266.001	Pendulum Arm D510 186	1	C/E		
18	5977640.001	Bracket	1			
19.1	5906355.001	Tension Spring	1	A/B		
19.2	5906358.001	Tension Spring	1	C		
20.1	6130000.001	Chassis	1	L		
20.2	6130008.001	Chassis	1	R		
21	6127192.001	Bolt	1			
22	6122065.001	Gear	1			
23	5902936.001	Screw ISO 7380F M4x6	10			
24	5971283.001	Damper	1			
25	5902941.001	Screw ISO14581-M4x16	10			
26	5975804.001	Spindle	1			
27	5975805.001	Half-Shell	1			
28	5903571.001	Snap Ring DIN471 25x1,2	10			
29.1	6127129.001	Axle	1	D		
29.2	6127130.001	Axle	1	E		
29.3	6127131.001	Axle	1	F		
29.4	6127132.001	Axle	1	G		
30	5902455.001	Screw DIN912 M5x25	10			
31	5902454.001	Screw DIN912 M5x18	10			
32	5983166.001	Strip	1			
33	5907513.001	Covering Cap M16x1.5	1			
34.1	6127134.001	Belt Roller 124	1	D		
34.2	6127135.001	Belt Roller 186	1	E		
34.3	6127136.001	Belt Roller 248	1	F		
34.4	6127137.001	Belt Roller 310	1	G		
35	6127196.001	Distance Bush	1	B/C		
36	6127197.001	Thread Ledge	1	B/C		
37	5903567.001	Snap Ring DIN471-8x1	10	B/C		
38.1	6122068.001	Plate	1	L/A		
38.2	6122069.001	Plate	1	R/A		
38.3	6122070.001	Plate	1	L/B		
38.4	6122071.001	Plate	1	R/B		
38.5	6122072.001	Plate	1	L/C		
38.6	6122073.001	Plate	1	R/C		

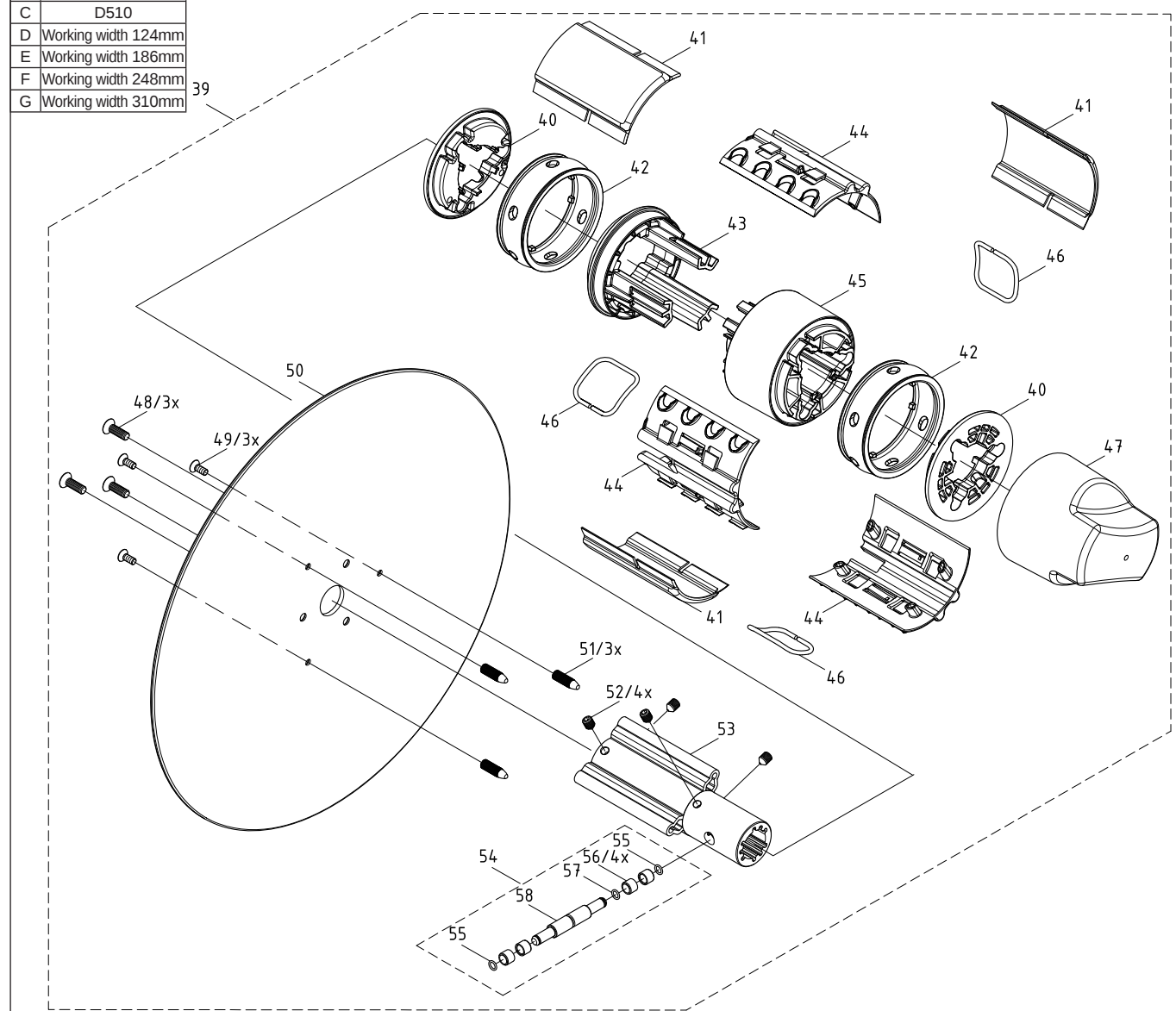


A17.17 Motor-driven rewinder - Winding Spindle

No	Part No.	Description	PU	Note	Time code	
					from	to
39.1	6127201.001	Winding Spindle	1	D		
39.2	6127202.001	Winding Spindle	1	E		
39.3	6127203.001	Winding Spindle	1	F		
39.4	6127204.001	Winding Spindle	1	G		
39.5	6127206.001	Winding Spindle	1	D		
39.6	6127207.001	Winding Spindle	1	E		
39.7	6127208.001	Winding Spindle	1	F		
39.8	6127210.001	Winding Spindle	1	D		
39.9	6127211.001	Winding Spindle	1	E		
40	5971634.001	Washer	1			
41.1	5983356.001	Cover	1	D		
41.2	5983357.001	Cover	1	E		
41.3	5983358.001	Cover	1	F/G		
42.1	5977724.001	Clamping Element	1			
42.2	5971402.001	Clamping Element	1	G		
43	5971636.001	Slider	1			
44.1	5983295.001	Shell	1	D		
44.2	5983296.001	Shell	1	E		
44.3	5983297.001	Shell	1	F/G		

No	Part No.	Description	PU	Note	Time code	
					from	to
45	5971637.001	Spacer Bushing	1			
46	5906336.001	Spring	5			
47	5983134.001	Handle Assembly	1			
48	5902477.001	Screw DIN7991-M5x16	10			
49	5902437.001	Screw DIN7991-M4x10	10			
50.1	6127200.001	Disk	1	A		
50.2	6127205.001	Disk	1	B		
50.3	6127209.001	Disk	1	C		
51	5971632.001	Spindle	1			
52	5904575.001	Set Screw DIN914-M6x8	10			
53.1	5983140.001	Profile	1	D		
53.2	5983138.001	Profile	1	E		
53.3	5983136.001	Profile	1	F		
53.4	5983131.001	Profile	1	G		
54	5983132.001	Rod	1			
55	5905892.001	O-Ring 4.5x1	10			
56	5907220.001	Plastic Bushing	10			
57	5905570.001	O-Ring 5x1.5	10			
58	5977714.001	Rod	1			

L	L version
R	R version
A	D310
B	D410
C	D510
D	Working width 124mm
E	Working width 186mm
F	Working width 248mm
G	Working width 310mm



A17.18 Motor-driven rewinder - Spare Parts Index

Pos.	Figure/Page			No.	Part No.	Description	PU	SPR				Notes	Time code	
													from	to
1	A19			8	5550214.001	PCB Winder Dancer	1							
2	A19			7	5551337.001	PCB Winder Power I/O	1							
3	A19			5	5902282.001	Screw DIN7984-M5x20	10							
4		A20		11	5902428.001	Screw DIN912 M4x12	10							
5			A21	49	5902437.001	Screw DIN7991-M4x10	10							
6		A20		31	5902454.001	Screw DIN912 M5x18	10							
7		A20		30	5902455.001	Screw DIN912 M5x25	10							
8			A21	48	5902477.001	Screw DIN7991-M5x16	10							
9		A20		23	5902936.001	Screw ISO 7380F M4x6	10							
10		A20		25	5902941.001	Screw ISO14581-M4x16	10							
11	A19			1	5902951.001	Screw DIN7984 M3x8	10							
12	A19			3	5903538.001	Snap Ring DIN471 17x1	10							
13		A20		16	5903553.001	Snap Ring DIN471-10	10							
14		A20		37	5903567.001	Snap Ring DIN471-8x1	10					B/C		
15		A20		28	5903571.001	Snap Ring DIN471 25x1,2	10							
16			A21	52	5904575.001	Set Screw DIN914-M6x8	10							
17			A21	57	5905570.001	O-Ring 5x1.5	10							
18			A21	55	5905892.001	O-Ring 4.5x1	10							
19			A21	46	5906336.001	Spring	5							
20		A20		19.1	5906355.001	Tension Spring	1					A/B		
21		A20		19.2	5906358.001	Tension Spring	1					C		
22			A21	56	5907220.001	Plastic Bushing	10							
23		A20		33	5907513.001	Covering Cap M16x1.5	1							
24	A19			10	5918728.001	Nut M12	10							
25		A20		24	5971283.001	Damper	1							
26	A19			2	5971302.001	Cover	1							
27			A21	42.2	5971402.001	Clamping Element	1					G		
28			A21	51	5971632.001	Spindle	1							
29			A21	40	5971634.001	Washer	1							
30			A21	43	5971636.001	Slider	1							
31			A21	45	5971637.001	Spacer Bushing	1							
32		A20		26	5975804.001	Spindle	1							
33		A20		27	5975805.001	Half-Shell	1							
34		A20		18	5977640.001	Bracket	1							
35			A21	58	5977714.001	Rod	1							
36	A19			9	5977722.001	PCB Winder	1							
37			A21	42.1	5977724.001	Clamping Element	1							
38			A21	53.4	5983131.001	Profile	1					G		
39			A21	54	5983132.001	Rod	1							
40			A21	47	5983134.001	Handle Assembly	1							
41			A21	53.3	5983136.001	Profile	1					F		
42			A21	53.2	5983138.001	Profile	1					E		
43			A21	53.1	5983140.001	Profile	1					D		
44		A20		32	5983166.001	Strip	1							
45			A21	44.1	5983295.001	Shell	1					D		
46			A21	44.2	5983296.001	Shell	1					E		
47			A21	44.3	5983297.001	Shell	1					F/G		
48			A21	41.1	5983356.001	Cover	1					D		
49			A21	41.2	5983357.001	Cover	1					E		
50			A21	41.3	5983358.001	Cover	1					F/G		
51	A19			6	5983438.001	Stator	1							
52	A19			4	5983439.001	Rotor	1							
53		A20		15	6111001.001	Roller	1							
54		A20		22	6122065.001	Gear	1							
55		A20		38.1	6122068.001	Plate	1					L/A		
56		A20		38.2	6122069.001	Plate	1					R/A		

PU Package unit

Notes

L L version

D Working width 124 mm

SPR Recommendation

R R version

E Working width 186 mm

A - wearing parts and accessories

A D310

F Working width 248 mm

B - recommended spare parts for quick repair

B D410

G Working width 310 mm

C - recommended spare parts for distributors

C D510

D - recommended spare parts for central stores

A17.18 Motor-driven rewinder - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
57		A20	38.3	6122070.001	Plate	1					L/B		
58		A20	38.4	6122071.001	Plate	1					R/B		
59		A20	38.5	6122072.001	Plate	1					L/C		
60		A20	38.6	6122073.001	Plate	1					R/C		
61		A20	14.1	6127103.001	Tube 124	1					D		
62		A20	14.2	6127104.001	Tube 186	1					E		
63		A20	14.3	6127105.001	Tube 248	1					F		
64		A20	14.4	6127106.001	Tube 310	1					G		
65		A20	29.1	6127129.001	Axle	1					D		
66		A20	29.2	6127130.001	Axle	1					E		
67		A20	29.3	6127131.001	Axle	1					F		
68		A20	29.4	6127132.001	Axle	1					G		
69		A20	34.1	6127134.001	Belt Roller 124	1					D		
70		A20	34.2	6127135.001	Belt Roller 186	1					E		
71		A20	34.3	6127136.001	Belt Roller 248	1					F		
72		A20	34.4	6127137.001	Belt Roller 310	1					G		
73		A20	21	6127192.001	Bolt	1							
74		A20	35	6127196.001	Distance Bush	1					B/C		
75		A20	36	6127197.001	Thread Ledge	1					B/C		
76		A21	50.1	6127200.001	Disk	1					A		
77		A21	39.1	6127201.001	Winding Spindle	1					D		
78		A21	39.2	6127202.001	Winding Spindle	1					E		
79		A21	39.3	6127203.001	Winding Spindle	1					F		
80		A21	39.4	6127204.001	Winding Spindle	1					G		
81		A21	50.2	6127205.001	Disk	1					B		
82		A21	39.5	6127206.001	Winding Spindle	1					D		
83		A21	39.6	6127207.001	Winding Spindle	1					E		
84		A21	39.7	6127208.001	Winding Spindle	1					F		
85		A21	50.3	6127209.001	Disk	1					C		
86		A21	39.8	6127210.001	Winding Spindle	1					D		
87		A21	39.9	6127211.001	Winding Spindle	1					E		
88		A20	17.1	6127258.001	Pendulum Arm D310 124	1					A/D		
89		A20	17.2	6127259.001	Pendulum Arm D310 186	1					A/E		
90		A20	17.3	6127260.001	Pendulum Arm D310 248	1					A/F		
91		A20	17.4	6127261.001	Pendulum Arm D310 310	1					A/G		
92		A20	17.5	6127262.001	Pendulum Arm D410 124	1					B/D		
93		A20	17.6	6127263.001	Pendulum Arm D410 186	1					B/E		
94		A20	17.7	6127264.001	Pendulum Arm D410 248	1					B/F		
95		A20	17.8	6127265.001	Pendulum Arm D510 124	1					C/D		
96		A20	17.9	6127266.001	Pendulum Arm D510 186	1					C/E		
97		A20	12	6127690.001	Binder	1							
98		A20	13.1	6127691.001	Tube D310	1					A		
99		A20	13.2	6127692.001	Tube D410	1					B		
100		A20	13.3	6127693.001	Tube D510	1					C		
101		A20	20.1	6130000.001	Chassis	1					L		
102		A20	20.2	6130008.001	Chassis	1					R		

PU Package unit

Notes

L L version

D Working width 124 mm

SPR Recommendation

R R version

E Working width 186 mm

A - wearing parts and accessories

A D310

F Working width 248 mm

B - recommended spare parts for quick repair

B D410

G Working width 310 mm

C - recommended spare parts for distributors

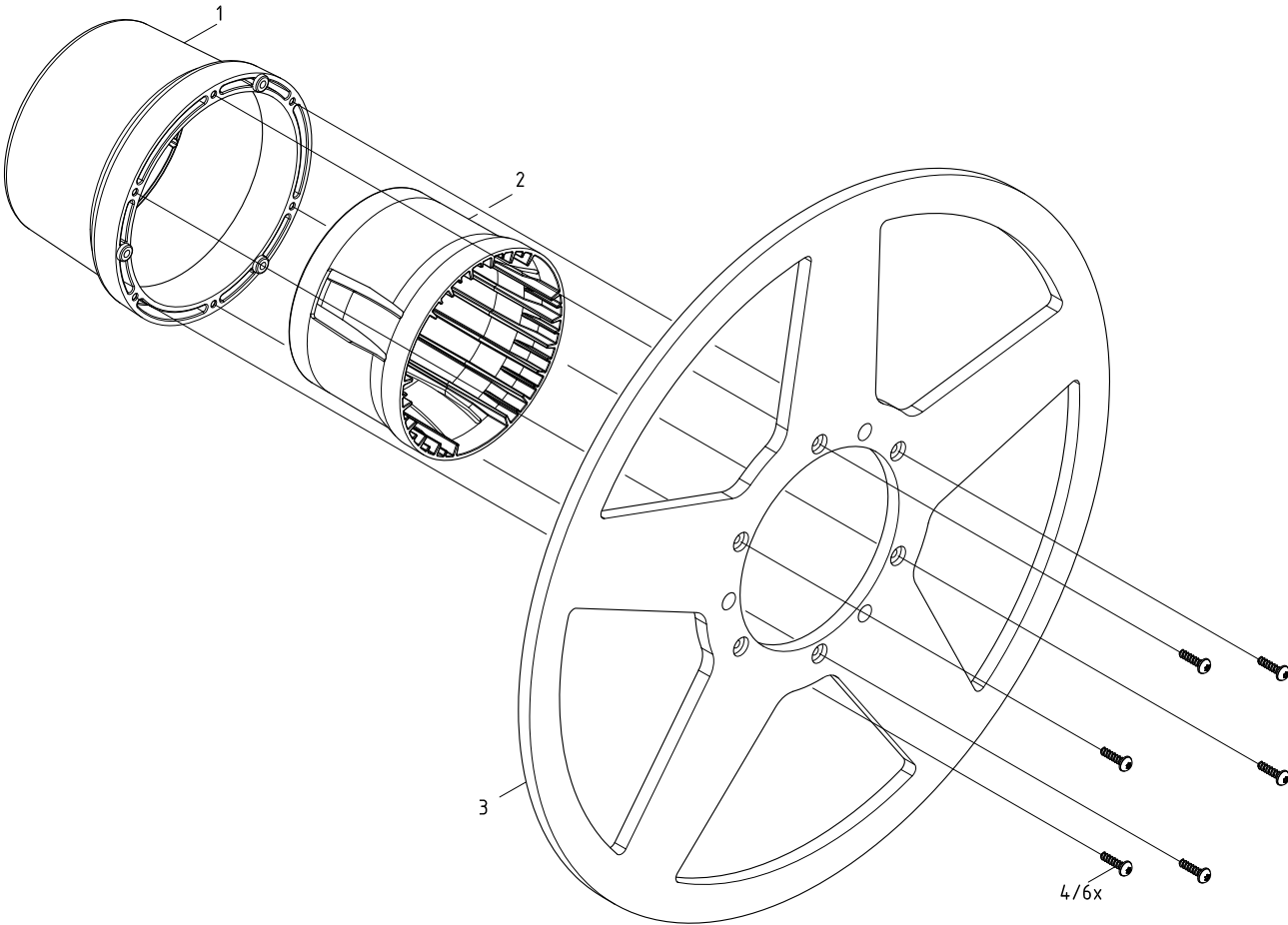
C D510

D - recommended spare parts for central stores

A17.19 Counterholder

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5983287.001	Core	1			
2	5983286.001	Socket	1			
3.1	5983289.001	Disk 310	1	A		
3.2	5983290.001	Disk 410	1	B		
3.3	6127098.001	Disk 510	1	C		
4	5902414.001	Screw EJOT-PT-K30x12	10			

A	Diameter 310 mm
B	Diameter 410 mm
C	Diameter 510 mm



A17 Spare parts

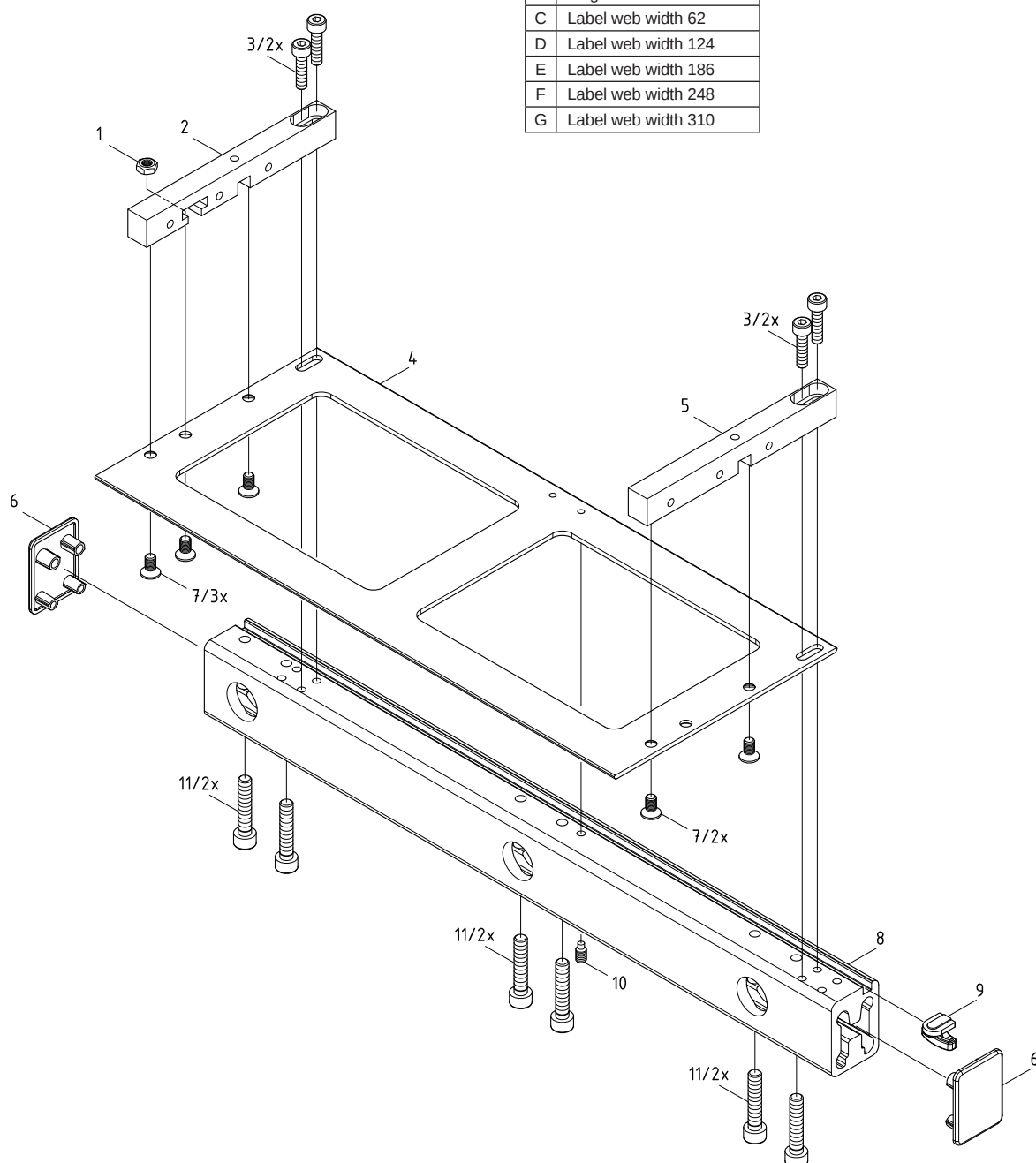
A25

A17.20 Peel-off plate

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902593.001	Nut DIN934-M4	10			
2.1	6127349.001	Beam	1	A		
2.2	6127351.001	Beam	1	B		
3	5902452.001	Screw DIN912-M4x16	10			
4.1	6127339.001	Dispense Plate	1	A/C		
4.2	6127340.001	Dispense Plate	1	A/D		
4.3	6127341.001	Dispense Plate	1	A/E		
4.4	6127342.001	Dispense Plate	1	A/F		
4.5	6127343.001	Dispense Plate	1	A/G		
4.6	6127344.001	Dispense Plate	1	B/C		
4.7	6127345.001	Dispense Plate	1	B/D		
4.8	6127346.001	Dispense Plate	1	B/E		
4.9	6127347.001	Dispense Plate	1	B/F		
4.10	6127348.001	Dispense Plate	1	B/G		
5.1	6127350.001	Beam	1	A		
5.2	6127352.001	Beam	1	B		

No	Part No.	Description	PU	Note	Time code	
					from	to
6	5972332.001	Cover	1			
7	5902846.001	Screw DIN7991-M4x8	10			
8.1	6127323.001	Profile	1	C/D/L		
8.2	6127327.001	Profile	1	C/D/R		
8.3	6127324.001	Profile	1	E/L		
8.4	6127328.001	Profile	1	E/R		
8.5	6127325.001	Profile	1	F/L		
8.6	6127329.001	Profile	1	F/R		
8.7	6127326.001	Profile	1	G/L		
8.8	6127330.001	Profile	1	G/R		
9	5971340.001	Margin Stop	1			
10	5904582.001	Set Screw DIN915-M4x8	10			
11	5902455.001	Screw DIN912 M5x25	10			

L	Left
R	Right
A	Length 100mm
B	Length 160mm
C	Label web width 62
D	Label web width 124
E	Label web width 186
F	Label web width 248
G	Label web width 310



A17.21 Peel-off plate - Spare Parts Index

Pos.	Figure/Page	No.	Part No.	Description	PU	SPR				Notes	Time code	
											from	to
1	A25	3	5902452.001	Screw DIN912-M4x16	10							
2	A25	11	5902455.001	Screw DIN912 M5x25	10							
3	A25	1	5902593.001	Nut DIN934-M4	10							
4	A25	7	5902846.001	Screw DIN7991-M4x8	10							
5	A25	10	5904582.001	Set Screw DIN915-M4x8	10							
6	A25	9	5971340.001	Margin Stop	1							
7	A25	6	5972332.001	Cover	1							
8	A25	8.1	6127323.001	Profile	1					C/D/L		
9	A25	8.3	6127324.001	Profile	1					E/L		
10	A25	8.5	6127325.001	Profile	1					F/L		
11	A25	8.7	6127326.001	Profile	1					G/L		
12	A25	8.2	6127327.001	Profile	1					C/D/R		
13	A25	8.4	6127328.001	Profile	1					E/R		
14	A25	8.6	6127329.001	Profile	1					F/R		
15	A25	8.8	6127330.001	Profile	1					G/R		
16	A25	4.1	6127339.001	Dispense Plate	1					A/C		
17	A25	4.2	6127340.001	Dispense Plate	1					A/D		
18	A25	4.3	6127341.001	Dispense Plate	1					A/E		
19	A25	4.4	6127342.001	Dispense Plate	1					A/F		
20	A25	4.5	6127343.001	Dispense Plate	1					A/G		
21	A25	4.6	6127344.001	Dispense Plate	1					B/C		
22	A25	4.7	6127345.001	Dispense Plate	1					B/D		
23	A25	4.8	6127346.001	Dispense Plate	1					B/E		
24	A25	4.9	6127347.001	Dispense Plate	1					B/F		
25	A25	4.10	6127348.001	Dispense Plate	1					B/G		
26	A25	2.1	6127349.001	Beam	1					A		
27	A25	2.2	6127350.001	Beam	1					A		
28	A25	5.1	6127351.001	Beam	1					B		
29	A25	5.2	6127352.001	Beam	1					B		

PU Package unit

Notes

L

Left

C

Label web width 62

R

Right

D

Label web width 124

SPR Recommendation

A

Length 100mm

E

Label web width 186

A - wearing parts and accessories

B

Length 160mm

F

Label web width 248

B - recommended spare parts for quick repair

G

Label web width 310

C - recommended spare parts for distributors

D - recommended spare parts for central stores

No	Part No.	Description	PU	Note	Time code	
					from	to
1	6120083.001	Spring	1			
2	6120090.001	Threaded Bolt	1			
3	6127464.001	Bolt	1			
4	5901025.001	Plastic Bushing	10			
5	6120084.001	Spring	1			
6	6127460.001	Plate	1			
7	5902925.001	Screw DIN912-M4x6	10			
8	5903122.001	Washer DIN125-A4.3	10			
9	5903548.001	E-Ring DIN6799-6	10			
10	5903020.001	Washer DIN988-8x14x0.5	10			
11.1	6127895.001	Pinch Roller 62	1	A		
11.2	6127896.001	Pinch Roller 124	1	B		
11.3	6127897.001	Pinch Roller 186	1	C		
11.4	6127898.001	Pinch Roller 248	1	D		
12.1	6127465.001	Axle 62	1	A		
12.2	6127466.001	Axle 124	1	B		
12.3	6127467.001	Axle 186	1	C		
12.4	6127468.001	Axle 248	1	D		

A	Label web width 62
B	Label web width 124
C	Label web width 186
D	Label web width 248

The diagram is an exploded view of a roller assembly. It shows the following components and their assembly sequence indicated by numbers:

- 1**: Spring, located at the top left.
- 2**: Threaded Bolt, located near the top right.
- 3**: Bolt, located in the center.
- 4**: Plastic Bushing, located on the right side.
- 5**: Spring, located at the bottom right.
- 6**: Plate, a long horizontal component in the center.
- 7**: Screw DIN912-M4x6, located on the left side.
- 8**: Washer DIN125-A4.3, located on the left side.
- 9**: E-Ring DIN6799-6, located at the bottom left.
- 10**: Washer DIN988-8x14x0.5, located at the bottom left.
- 11**: Pinch Roller, a large cylindrical component at the bottom left.
- 12**: Axle, a long shaft at the bottom.

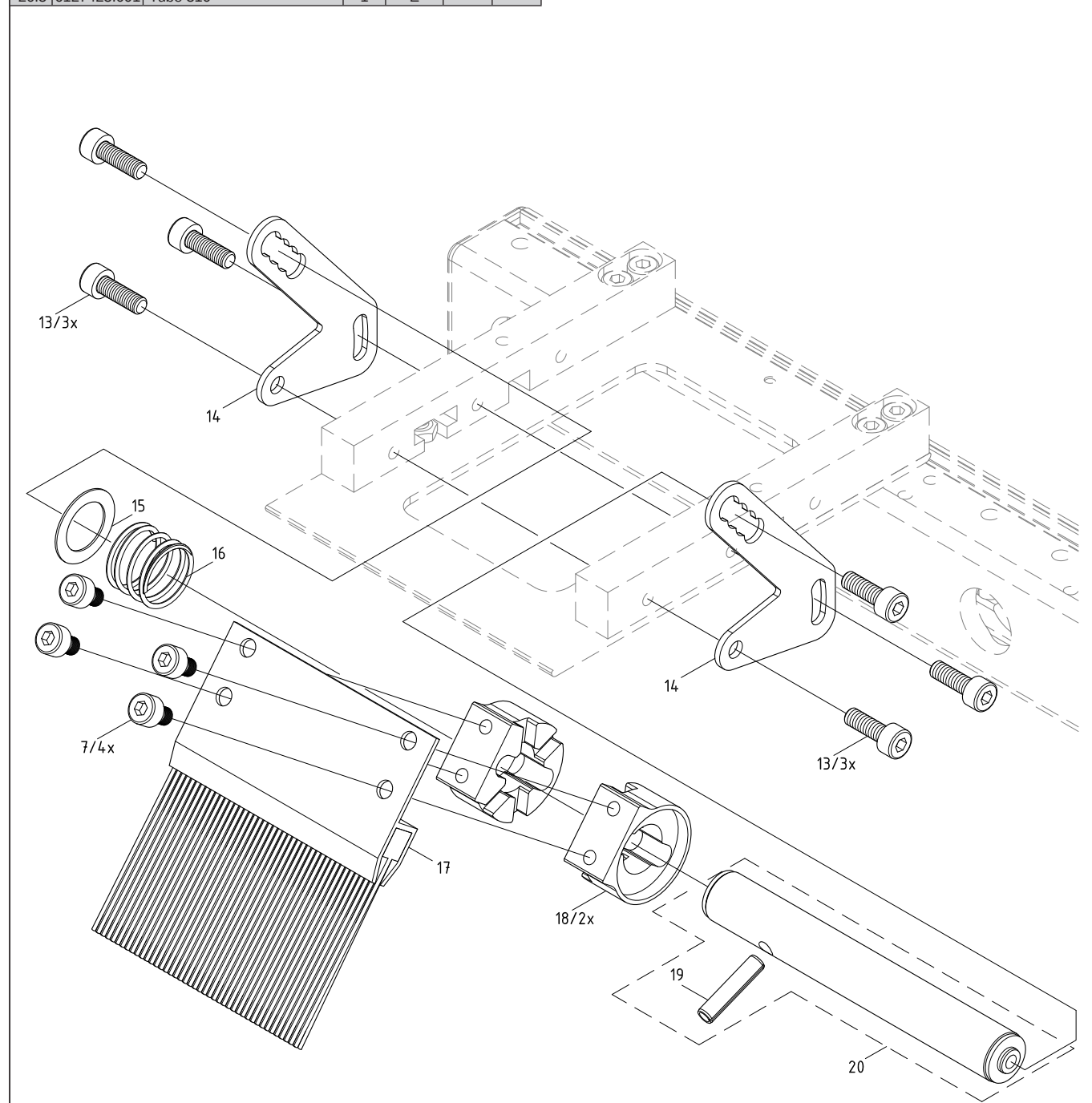
The diagram shows how these parts fit together to form a roller assembly, with dashed lines indicating the alignment and assembly path.

A	Label web width 62
B	Label web width 124
C	Label web width 186
D	Label web width 248

A17.23 Wipe-down brush

No	Part No.	Description	PU	Note	Time code	
					from	to
7	5902925.001	Screw DIN912-M4x6	10			
13	5902428.001	Screw DIN912 M4x12	10			
14	6127412.001	Plate	1			
15	5903145.001	Washer DIN988-12x18x0,5	10			
16	5906344.001	Spring	1			
17.1	6120152.001	Brush 62	1	A		
17.2	6120153.001	Brush 124	1	B		
17.3	6120154.001	Brush 186	1	C		
17.4	6120155.001	Brush 248	1	D		
17.5	6120156.001	Brush 310	1	E		
18	6120136.001	Ratched	1			
19	5904146.001	Pin DIN1481 4x18	10			
20.1	6127419.001	Tube 62	1	A		
20.2	6127420.001	Tube 124	1	B		
20.3	6127421.001	Tube 186	1	C		
20.4	6127422.001	Tube 248	1	D		
20.5	6127423.001	Tube 310	1	E		

A	Label web width 62
B	Label web width 124
C	Label web width 186
D	Label web width 248
E	Label web width 310



A17.24 Wipe down systems - Spare Parts Index

Pos.	Figure/Page	No.	Part No.	Description	PU	SPR				Notes	Time code	
											from	to
1	A27		4	5901025.001	Plastic Bushing	10						
2		A28	13	5902428.001	Screw DIN912 M4x12	10						
3	A27	A28	7	5902925.001	Screw DIN912-M4x6	10						
4	A27		10	5903020.001	Washer DIN988-8x14x0.5	10						
5	A27		8	5903122.001	Washer DIN125-A4.3	10						
6		A28	15	5903145.001	Washer DIN988-12x18x0,5	10						
7	A27		9	5903548.001	E-Ring DIN6799-6	10						
8		A28	19	5904146.001	Pin DIN1481 4x18	10						
9		A28	16	5906344.001	Spring	1			C	D		
10	A27		1	6120083.001	Spring	1			C	D		
11	A27		5	6120084.001	Spring	1			C	D		
12	A27		2	6120090.001	Threaded Bolt	1						
13		A28	18	6120136.001	Ratched	1						
14		A28	17.1	6120152.001	Brush 62	1		B	C	D	A	
15		A28	17.2	6120153.001	Brush 124	1		B	C	D	B	
16		A28	17.3	6120154.001	Brush 186	1		B	C	D	C	
17		A28	17.4	6120155.001	Brush 248	1		B	C	D	D	
18		A28	17.5	6120156.001	Brush 310	1		B	C	D	E	
19		A28	14	6127412.001	Plate	1						
20		A28	20.1	6127419.001	Tube 62	1				A		
21		A28	20.2	6127420.001	Tube 124	1				B		
22		A28	20.3	6127421.001	Tube 186	1				C		
23		A28	20.4	6127422.001	Tube 248	1				D		
24		A28	20.5	6127423.001	Tube 310	1				E		
25	A27		6	6127460.001	Plate	1						
26	A27		3	6127464.001	Bolt	1				A		
27	A27		12.1	6127465.001	Axle 62	1				B		
28	A27		12.2	6127466.001	Axle 124	1				C		
29	A27		12.3	6127467.001	Axle 186	1				D		
30	A27		12.4	6127468.001	Axle 248	1						
31	A27		11.1	6127895.001	Pinch Roller 62	1	A	B	C	D	A	
32	A27		11.2	6127896.001	Pinch Roller 124	1	A	B	C	D	B	
33	A27		11.3	6127897.001	Pinch Roller 186	1	A	B	C	D	C	
34	A27		11.4	6127898.001	Pinch Roller 248	1	A	B	C	D	D	

PU Package unit

Notes

A

Label web width 62

B

Label web width 124

C

Label web width 186

D

Label web width 248

E

Label web width 310

SPR Recommendation

A - wearing parts and accessories

B - recommended spare parts for quick repair

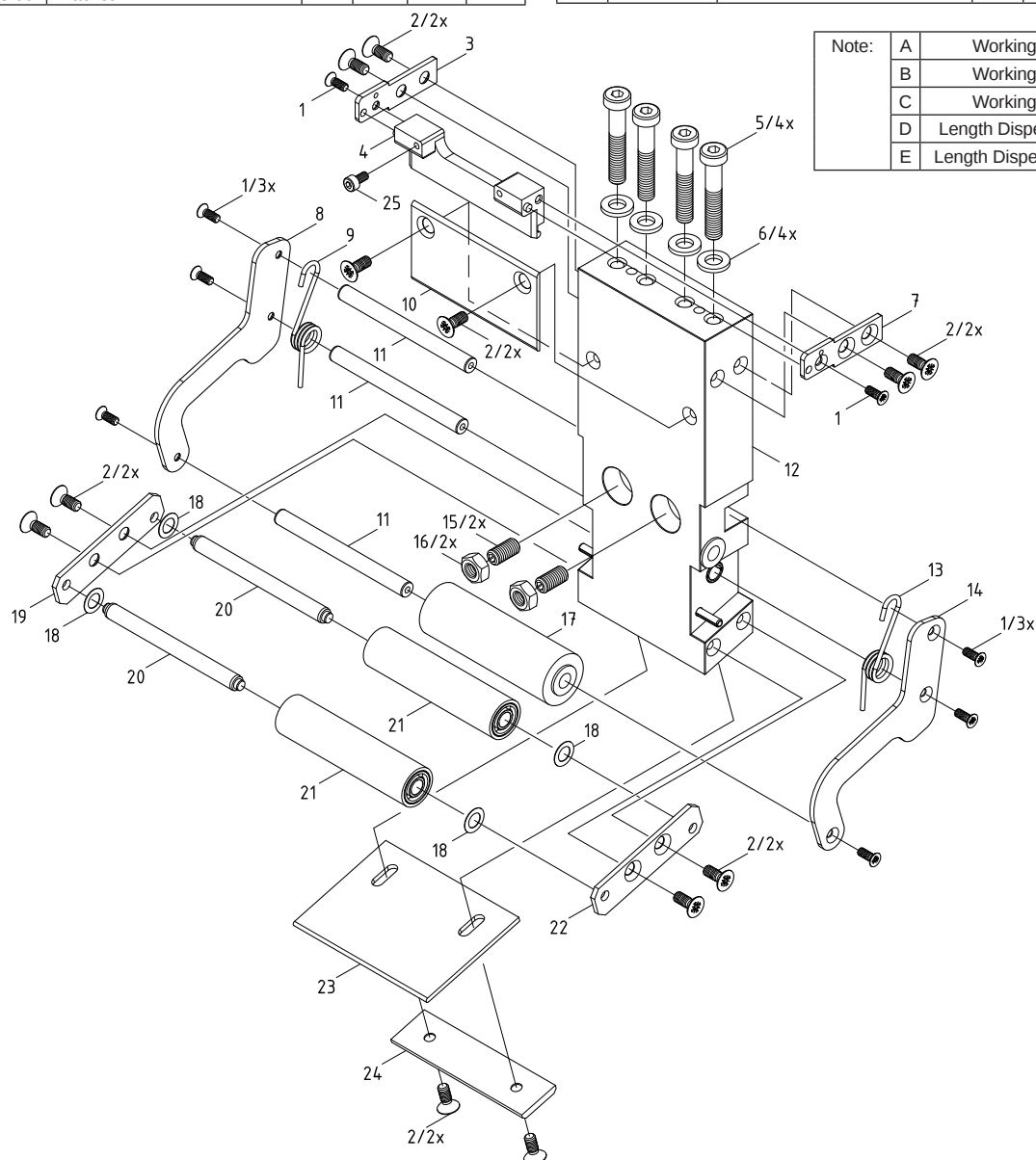
C - recommended spare parts for distributors

D - recommended spare parts for central stores

A17.25 Dispense plate fix 75° fix° - 6127800, 6127801, 6127802, 6127803

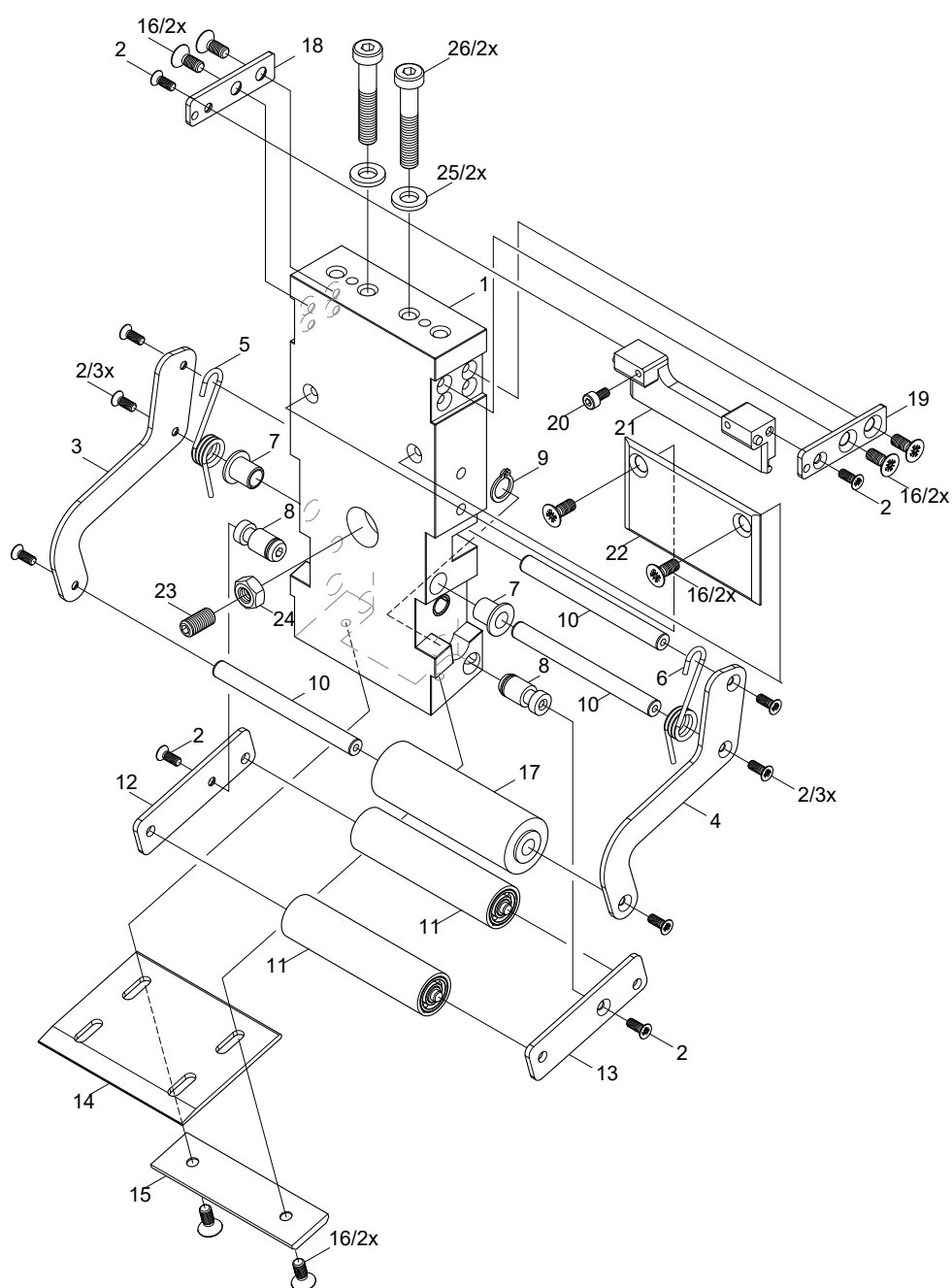
No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902945.001	Screw DIN965 M3x8	10			
2	5902946.001	Screw DIN965 M4x10	10			
3	6127830.001	Bar	1			
4.1	6127841.001	Bar	1	A		
4.1	6127853.001	Bar	1	B		
4.2	6127837.001	Bar	1	C		
5	5902916.001	Screw DIN7984 M6x35	10			
6	5903119.001	Washer DIN125 A6.4	10			
7	6127831.001	Bar	1			
8.1	6127842.001	Bracket	1	D		
8.2	6127822.001	Bracket	1	E		
9	6127839.001	Spring	1			
10.1	6127808.001	Slide Plate	1	A		
10.2	6127846.001	Slide Plate	1	B		
10.3	6127809.001	Slide Plate	1	C		
11.1	6127821.001	Axle	1	A		
11.2	6127850.001	Axle	1	B		
11.3	6127819.001	Axle	1	C		
12.1	6127805.001	Retainer	1	A		
12.2	6127845.001	Retainer	1	B		
12.3	6127807.001	Retainer	1	C		
13	6127838.001	Spring	1			
14.1	6127843.001	Bracket	1	D		
14.2	6127823.001	Bracket	1	E		

No	Part No.	Description	PU	Note	Time code	
					from	to
15	5904581.001	Set Screw DIN913-M 6x12	10			
16	5902688.001	Nut DIN934-M6	10			
17.1	6127879.001	Pinch Roller	1	A		
17.2	6127878.001	Pinch Roller	1	B		
17.3	6127880.001	Pinch Roller	1	C		
18	5903072.001	Washer DIN988-6x10x0.2	10			
19.1	6127810.001	Plate	1	D		
19.2	6127812.001	Plate	1	E		
20.1	6127820.001	Axle	1	A		
20.2	6127849.001	Axle	1	B		
20.3	6127818.001	Axle	1	C		
21.1	6127815.001	Tube	1	A		
21.2	6127848.001	Tube	1	B		
21.3	6127817.001	Tube	1	C		
22.1	6127811.001	Plate	1	D		
22.2	6127813.001	Plate	1	E		
23.1	6127824.001	Dispense Plate	1	A/D		
23.2	6127825.001	Dispense Plate	1	B/D		
23.3	6127826.001	Dispense Plate	1	C/D		
23.4	6127827.001	Dispense Plate	1	C/E		
24.1	6127828.001	Bar	1	A		
24.2	6127851.001	Bar	1	B		
24.3	6127829.001	Bar	1	C		
25	5902426.001	Screw DIN912-M3x6	10			



A17.26 Dispense plate fix 75° fix- 6127871

No	Part No.	Description	PU	Note	Serial No.	
					from	to
1	5902945.001	Screw DIN965-M3x8	10			
2	5902946.001	Screw DIN965-M4x10	10			
3	6127830.001	Bar	1			
4.1	6127853.001	Bar	1			
5	5902916.001	Screw DIN7984-M6x35	10			
6	5903119.001	Washer DIN125-A6.4	10			
7	6127831.001	Bar	1			
10.2	6127846.001	Slide Plate	1			
11.2	6127850.001	Axle	1			
15	5904581.001	Set Screw DIN913-M6x12	10			
16	5902688.001	Nut DIN934-M6	10			
17.2	6127878.001	Pinch Roller	1			
23.2	6127825.001	Dispense Plate	1			



A17.27 Peel-off plate 75° fix- Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR					Notes	Serial No.	
													from	to
1		A31	31	5901150.001	Plastic Bushing	10	-	-	-	-	D			
2	A30	A31	25	5902426.001	Screw DIN912-M3x6	10	-	-	-	-				
3	A30	A31	16	5902688.001	Nut DIN934-M6	10	-	-	-	-				
4	A30	A31	5	5902916.001	Screw DIN7984-M6x35	10	-	-	-	-				
5	A30	A31	1	5902945.001	Screw DIN965-M3x8	10	-	-	-	-				
6	A30	A31	2	5902946.001	Screw DIN965-M4x10	10	-	-	-	-				
7	A30		18	5903072.001	Washer DIN988-6x10x0.2	10	-	-	-	-				
8	A30	A31	6	5903119.001	Washer DIN125-A6.4	10	-	-	-	-				
9		A31	33	5903567.001	Snap Ring DIN471-8x1	10	-	-	-	-				
10	A30	A31	15	5904581.001	Set Screw DIN913-M6x12	10	-	-	-	-				
11	A30		12.1	6127805.001	Retainer	1	-	-	-	-	A			
12	A30		12.3	6127807.001	Retainer	1	-	-	-	-	C			
13	A30		10.1	6127808.001	Slide Plate	1	-	-	-	-	A			
14	A30		10.3	6127809.001	Slide Plate	1	-	-	-	-	C			
15	A30		19.1	6127810.001	Plate	1	-	-	-	-	D			
16	A30		22.1	6127811.001	Plate	1	-	-	-	-	D			
17	A30		19.2	6127812.001	Plate	1	-	-	-	-	E			
18	A30		22.2	6127813.001	Plate	1	-	-	-	-	E			
19	A30		21.1	6127815.001	Tube	1	A	B	C	D	A			
20	A30		21.3	6127817.001	Tube	1	A	B	C	D	C			
21	A30		20.3	6127818.001	Axle	1	-	-	-	-	C			
22	A30		11.3	6127819.001	Axle	1	-	-	-	-	C			
23	A30		20.1	6127820.001	Axle	1	-	-	-	-	A			
24	A30		11.1	6127821.001	Axle	1	-	-	-	-	A			
25	A30		8.2	6127822.001	Bracket	1	-	-	-	-	E			
26	A30		14.2	6127823.001	Bracket	1	-	-	-	-	E			
27	A30		23.1	6127824.001	Dispense Plate	1	-	-	-	-	A/D			
28	A30	A31	23.2	6127825.001	Dispense Plate	1	-	-	-	-	B/D			
29	A30		23.3	6127826.001	Dispense Plate	1	-	-	-	-	C/D			
30	A30		23.4	6127827.001	Dispense Plate	1	-	-	-	-	C/E			
31	A30		24.1	6127828.001	Bar	1	-	-	-	-	A			
32	A30		24.3	6127829.001	Bar	1	-	-	-	-	C			
33	A30	A31	3	6127830.001	Bar	1	-	-	-	-				
34	A30	A31	7	6127831.001	Bar	1	-	-	-	-				
35	A30		4.2	6127837.001	Bar	1	-	-	-	-	C			
36	A30		13	6127838.001	Spring	1	-	B	C	D				
37	A30		9	6127839.001	Spring	1	-	B	C	D				
38	A30		4.1	6127841.001	Bar	1	-	-	-	-	A			
39	A30		8.1	6127842.001	Bracket	1	-	-	-	-	D			
40	A30		14.1	6127843.001	Bracket	1	-	-	-	-	D			
41	A30		12.2	6127845.001	Retainer	1	-	-	-	-	B			
42	A30	A31	10.2	6127846.001	Slide Plate	1	-	-	-	-	B			
43	A30		21.2	6127848.001	Tube	1	A	B	C	D	B			
44	A30		20.2	6127849.001	Axle	1	-	-	-	-	B			
45	A30	A31	11.2	6127850.001	Axle	1	-	-	-	-	B			
46	A30	A31	24.2	6127851.001	Bar	1	-	-	-	-	B			
47	A30	A31	4.1	6127853.001	Bar	1	-	-	-	-	B			
48		A31	30	6127860.001	Spring	1	-	-	-	-				
49		A31	29	6127861.001	Spring	1	-	-	-	-				
50		A31	32	6127865.001	Bolt	1	-	-	-	-				
51		A31	35	6127866.001	Side Plate	1	-	-	-	-				
52		A31	36	6127867.001	Side Plate	1	-	-	-	-				
53		A31	27	6127868.001	Arm	1	-	-	-	-				
54		A31	28	6127869.001	Arm	1	-	-	-	-				
55		A31	26	6127875.001	Retainer	1	-	-	-	-				
56	A30	A31	17.2	6127878.001	Pinch Roller	1	A	B	C	D	B			
57	A30		17.1	6127879.001	Pinch Roller	1	A	B	C	D	A			
58	A30		17.3	6127880.001	Pinch Roller	1	A	B	C	D	C			
59		A31	34	6127882.001	Roll	1	-	-	-	-				

PU Package unit

Note

A Working width 42
 B Working width 62
 C Working width 82
 D Length Dispense Plate 50
 E Length Dispense Plate 100

SPR Recommendation

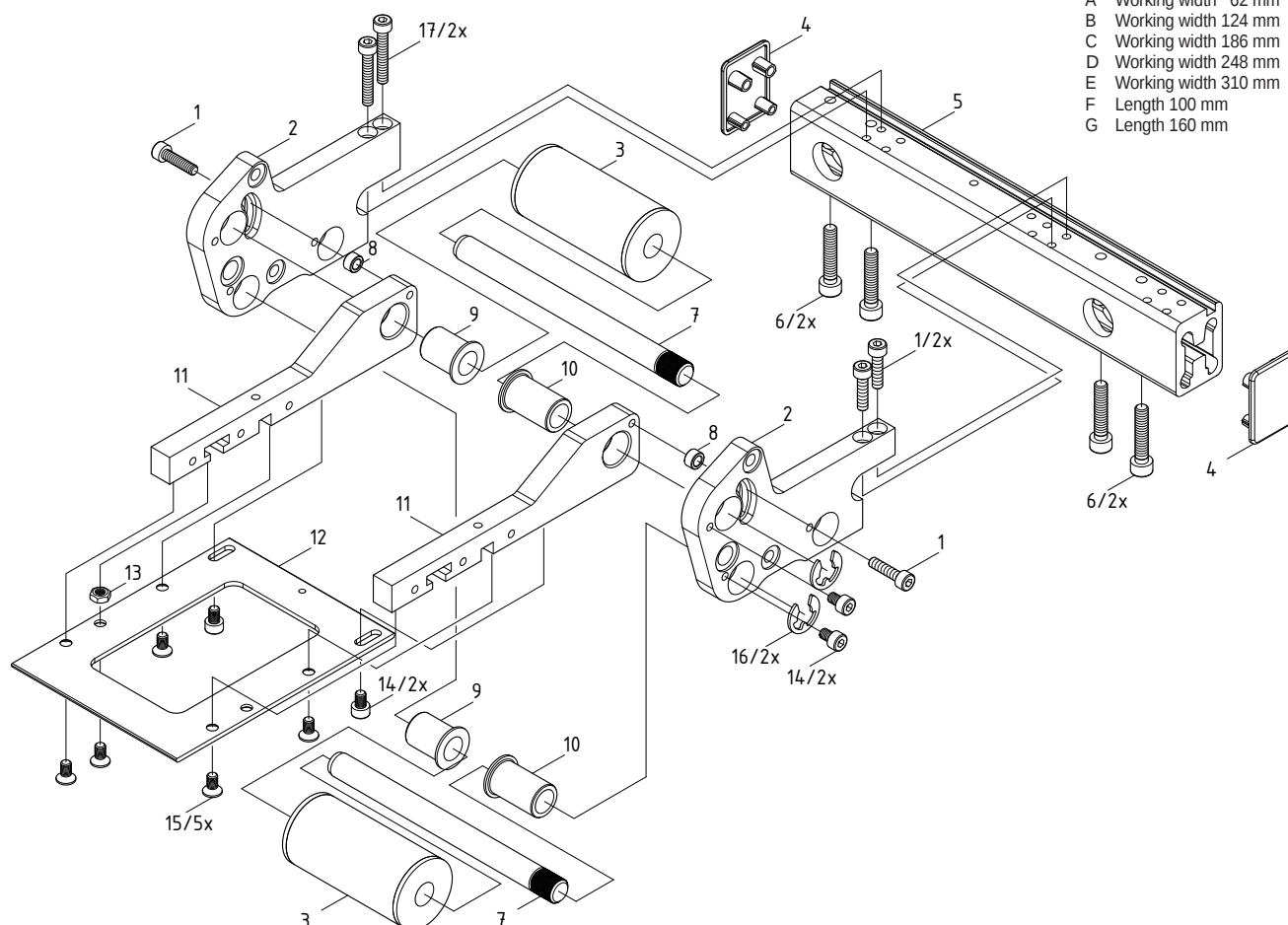
A - wearing parts and accessories
 B - recommended spare parts for quick repair
 C - recommended spare parts for distributors
 D - recommended spare parts for central stores

A17.28 Peel-off plate adjustable 0° to +75°

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902452.001	Screw DIN912-M4x16	10			
2	6127357.001	Plate	1			
3.1	5907559.001	Belt Roller	1	A		
3.2	5907561.001	Belt Roller	1	B		
3.3	5907562.001	Belt Roller	1	C		
3.4	5907563.001	Belt Roller	1	D		
3.4	5907564.001	Belt Roller	1	E		
4	5972332.001	Cover	1			
5.1	6127324.001	Profile	1	L/A		
5.2	6127328.001	Profile	1	L/B		
5.3	6127325.001	Profile	1	L/C		
5.4	6127329.001	Profile	1	L/D		
5.5	6127334.001	Profile	1	L/E		
5.6	6127335.001	Profile	1	R/B		
5.7	6127336.001	Profile	1	R/C		
5.8	6127337.001	Profile	1	R/D		
5.9	6127338.001	Profile	1	R/E		
6	5902455.001	Screw DIN912 M5x25	10			
7.1	6127428.001	Axle	1	A		
7.2	6127429.001	Axle	1	B		
7.3	6127430.001	Axle	1	C		
7.4	6127431.001	Axle	1	D		
7.5	6127432.001	Axle	1	E		

No	Part No.	Description	PU	Note	Time code	
					from	to
8	6127452.001	Distance Bush	1			
9	5901171.001	Friction Bearing d=10	10			
10	5901172.001	Friction Bearing d=10	10			
11.1	6127402.001	Arm	1	E		
11.2	6127405.001	Arm	1	F		
12.1	6127339.001	Dispense Plate	1	A/F		
12.2	6127340.001	Dispense Plate	1	B/F		
12.3	6127341.001	Dispense Plate	1	C/F		
12.4	6127342.001	Dispense Plate	1	D/F		
12.5	6127343.001	Dispense Plate	1	E/F		
12.6	6127344.001	Dispense Plate	1	A/G		
12.7	6127345.001	Dispense Plate	1	B/G		
12.8	6127346.001	Dispense Plate	1	C/G		
12.9	6127347.001	Dispense Plate	1	D/G		
12.10	6127348.001	Dispense Plate	1	E/G		
13	5902593.001	Nut DIN934-M4	10			
14	5902925.001	Screw DIN912-M4x6	10			
15	5902846.001	Screw DIN7991-M4x8	10			
16	5903549.001	E-Ring DIN6799-8	10			
17	5909230.001	Screw DIN912-M4x25	10			

Note L Left version
R Right version
A Working width 62 mm
B Working width 124 mm
C Working width 186 mm
D Working width 248 mm
E Working width 310 mm
F Length 100 mm
G Length 160 mm



A17.29 Peel-off plate adjustable 0° to +75° - Spare Parts Index

Pos.	Figure/Page	No.	Part No.	Description	PU	SPR					Notes	Time code	
												from	to
1	A33	9	5901171.001	Friction Bearing d=10	10	-	-	C	D				
2	A33	10	5901172.001	Friction Bearing d=10	10	-	-	C	D				
3	A33	1	5902452.001	Screw DIN912-M4x16	10	-	-	-	-				
4	A33	6	5902455.001	Screw DIN912 M5x25	10	-	-	-	-				
5	A33	13	5902593.001	Nut DIN934-M4	10	-	-	-	-				
6	A33	15	5902846.001	Screw DIN7991-M4x8	10	-	-	-	-				
7	A33	14	5902925.001	Screw DIN912-M4x6	10	-	-	-	-				
8	A33	16	5903549.001	E-Ring DIN6799-8	10	-	-	-	-				
9	A33	3.1	5907559.001	Roller	1	-	-	-	D	A			
10	A33	3.2	5907561.001	Belt Roller	1	-	-	-	D	B			
11	A33	3.3	5907562.001	Belt Roller	1	-	-	-	D	C			
12	A33	3.4	5907563.001	Belt Roller	1	-	-	-	D	D			
13	A33	3.4	5907564.001	Belt Roller	1	-	-	-	D	E			
14	A33	17	5909230.001	Screw DIN912 M4x25	10	-	-	-	-				
15	A33	4	5972332.001	Cover	1	-	-	-	-				
16	A33	5.1	6127324.001	Profile	1	-	-	-	-	L/A			
17	A33	5.3	6127325.001	Profile	1	-	-	-	-	L/C			
18	A33	5.2	6127328.001	Profile	1	-	-	-	-	L/B			
19	A33	5.4	6127329.001	Profile	1	-	-	-	-	L/D			
20	A33	5.5	6127334.001	Profile	1	-	-	-	-	L/E			
21	A33	5.6	6127335.001	Profile	1	-	-	-	-	R/B			
22	A33	5.7	6127336.001	Profile	1	-	-	-	-	R/C			
23	A33	5.8	6127337.001	Profile	1	-	-	-	-	R/D			
24	A33	5.9	6127338.001	Profile	1	-	-	-	-	R/E			
25	A33	12.1	6127339.001	Dispense Plate	1	-	-	-	-	A/F			
26	A33	12.2	6127340.001	Dispense Plate	1	-	-	-	-	B/F			
27	A33	12.3	6127341.001	Dispense Plate	1	-	-	-	-	C/F			
28	A33	12.4	6127342.001	Dispense Plate	1	-	-	-	-	D/F			
29	A33	12.5	6127343.001	Dispense Plate	1	-	-	-	-	E/F			
30	A33	12.6	6127344.001	Dispense Plate	1	-	-	-	-	A/G			
31	A33	12.7	6127345.001	Dispense Plate	1	-	-	-	-	B/G			
32	A33	12.8	6127346.001	Dispense Plate	1	-	-	-	-	C/G			
33	A33	12.9	6127347.001	Dispense Plate	1	-	-	-	-	D/G			
34	A33	12.10	6127348.001	Dispense Plate	1	-	-	-	-	E/G			
35	A33	2	6127357.001	Plate	1	-	-	-	-				
36	A33	11.1	6127402.001	Arm	1	-	-	-	-	E			
37	A33	11.2	6127405.001	Arm	1	-	-	-	-	F			
38	A33	7.1	6127428.001	Axle	1	-	-	-	-	A			
39	A33	7.2	6127429.001	Axle	1	-	-	-	-	B			
40	A33	7.3	6127430.001	Axle	1	-	-	-	-	C			
41	A33	7.4	6127431.001	Axle	1	-	-	-	-	D			
42	A33	7.5	6127432.001	Axle	1	-	-	-	-	E			
43	A33	8	6127452.001	Distance Bush	1	-	-	-	-				

PU Package unit

Note

L Left version

F Length 100 mm

R Right version

G Length 160 mm

SPR Recommendation

A - wearing parts and accessories

B - recommended spare parts for quick repair

C - recommended spare parts for distributors

D - recommended spare parts for central stores

A Working width 62 mm

B Working width 124 mm

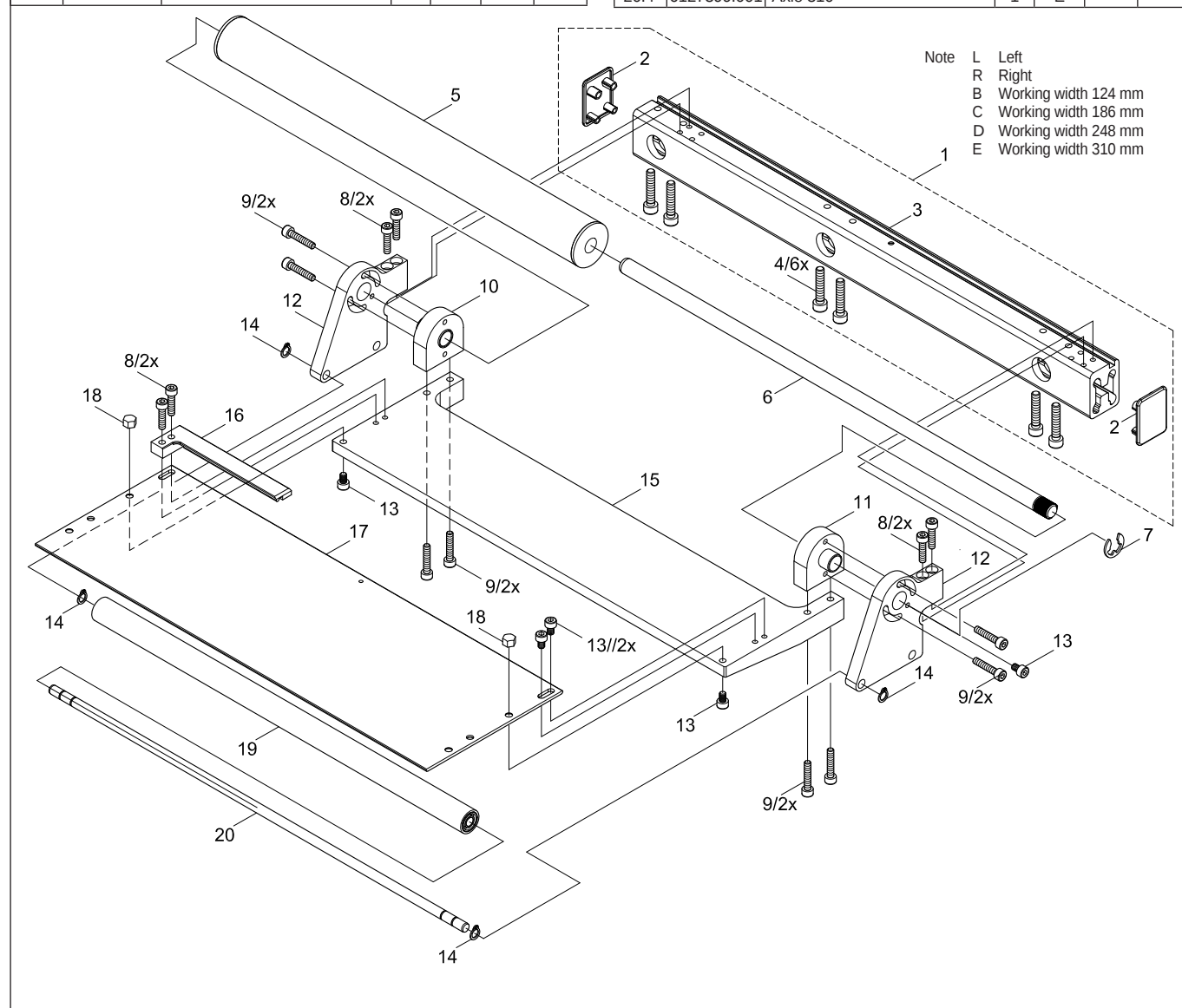
C Working width 186 mm

D Working width 248 mm

E Working width 310 mm

A17.30 Peel-off plate adjustable 0° to 90°

No	Part No.	Description	PU	Note	Serial No.	
					from	to
1.1	6127331.001	Profile	1	L/B		
1.2	6127335.001	Profile	1	R/B		
1.3	6127332.001	Profile	1	L/C		
1.4	6127336.001	Profile	1	R/C		
1.5	6127333.001	Profile	1	L/D		
1.6	6127337.001	Profile	1	R/D		
1.7	6127334.001	Profile	1	L/E		
1.8	6127338.001	Profile	1	R/E		
2	5972332.001	Cover	1			
3.1	6127323.001	Profile	1	L/B		
3.2	6127327.001	Profile	1	R/B		
3.3	6127324.001	Profile	1	L/C		
3.4	6127328.001	Profile	1	R/C		
3.5	6127325.001	Profile	1	L/D		
3.6	6127329.001	Profile	1	R/D		
3.7	6127326.001	Profile	1	L/E		
3.8	6127330.001	Profile	1	R/E		
4	5902455.001	Screw DIN912 M5x25	10			
5.1	5907561.001	Belt Roller	1	B		
5.2	5907562.001	Belt Roller	1	C		
5.3	5907563.001	Belt Roller	1	D		
5.4	5907564.001	Belt Roller	1	E		
6.1	6127429.001	Axle	1	B		
6.2	6127430.001	Axle	1	C		
6.3	6127431.001	Axle	1	D		
6.4	6127432.001	Axle	1	E		
7	5903549.001	E-Ring DIN6799-8	10			
8	5902452.001	Screw DIN912-M4x16	10			
9	5902443.001	Screw DIN912 M4x20	10			
10	6127702.001	Bearing Bracket	1			
11	6127703.001	Bearing Bracket	1			
12	6127700.001	Side Plate	1			
13	5902925.001	Screw DIN912-M4x6	10			
14	5903552.001	Snap Ring DIN471-6	10			
15.1	6127705.001	Wedge 124	1	B		
15.2	6127706.001	Wedge 186	1	C		
15.3	6127707.001	Wedge 248	1	D		
15.4	6127708.001	Wedge 310	1	E		
16	6127433.001	Strip	1			
17.1	5972357.001	Dispense Plate 100/124	1	B		
17.2	5972536.001	Dispense Plate 100/186	1	C		
17.3	5972677.001	Dispense Plate 100/248	1	D		
17.4	5972678.001	Dispense Plate 100/310	1	E		
18	5909249.001	Cover Nut DIN917 M4	10			
19.1	6127380.001	Tube 124	1	B		
19.2	6127381.001	Tube 186	1	C		
19.3	6127382.001	Tube 248	1	D		
19.4	6127383.001	Tube 310	1	E		
20.1	6127396.001	Axle 124	1	B		
20.2	6127397.001	Axle 186	1	C		
20.3	6127398.001	Axle 248	1	D		
20.4	6127399.001	Axle 310	1	E		



A17.31 Peel-off plate adjustable 0° to 90° - Spare Parts Index

Pos.	Figure/Page	No.	Part No.	Description	PU	SPR					Notes	Serial No.	
												from	to
1	A35	9	5902443.001	Screw DIN912 M4x20	10	-	-	-	-				
2	A35	8	5902452.001	Screw DIN912-M4x16	10	-	-	-	-				
3	A35	4	5902455.001	Screw DIN912 M5x25	10	-	-	-	-				
4	A35	13	5902925.001	Screw DIN912-M4x6	10	-	-	-	-				
5	A35	7	5903549.001	E-Ring DIN6799-8	10	-	-	-	-				
6	A35	14	5903552.001	Snap Ring DIN471-6	10	-	-	-	-				
7	A35	5.1	5907561.001	Belt Roller	1	-	-	-	D	B			
8	A35	5.2	5907562.001	Belt Roller	1	-	-	-	D	C			
9	A35	5.3	5907563.001	Belt Roller	1	-	-	-	D	D			
10	A35	5.4	5907564.001	Belt Roller	1	-	-	-	D	E			
11	A35	18	5909249.001	Cover Nut DIN917 M4	10	-	-	-	-				
12	A35	2	5972332.001	Cover	1	-	-	-	-				
13	A35	17.1	5972357.001	Dispense Plate 100/124	1	-	-	-	-	B			
14	A35	17.2	5972536.001	Dispense Plate 100/186	1	-	-	-	-	C			
15	A35	17.3	5972677.001	Dispense Plate 100/248	1	-	-	-	-	D			
16	A35	17.4	5972678.001	Dispense Plate 100/310	1	-	-	-	-	E			
17	A35	3.1	6127323.001	Profile	1	-	-	-	-	L/B			
18	A35	3.3	6127324.001	Profile	1	-	-	-	-	L/C			
19	A35	3.5	6127325.001	Profile	1	-	-	-	-	L/D			
20	A35	3.7	6127326.001	Profile	1	-	-	-	-	L/E			
21	A35	3.2	6127327.001	Profile	1	-	-	-	-	R/B			
22	A35	3.4	6127328.001	Profile	1	-	-	-	-	R/C			
23	A35	3.6	6127329.001	Profile	1	-	-	-	-	R/D			
24	A35	3.8	6127330.001	Profile	1	-	-	-	-	R/E			
25	A35	1.1	6127331.001	Profile	1	-	-	-	-	L/B			
26	A35	1.3	6127332.001	Profile	1	-	-	-	-	L/C			
27	A35	1.5	6127333.001	Profile	1	-	-	-	-	L/D			
28	A35	1.7	6127334.001	Profile	1	-	-	-	-	L/E			
29	A35	1.2	6127335.001	Profile	1	-	-	-	-	R/B			
30	A35	1.4	6127336.001	Profile	1	-	-	-	-	R/C			
31	A35	1.6	6127337.001	Profile	1	-	-	-	-	R/D			
32	A35	1.8	6127338.001	Profile	1	-	-	-	-	R/E			
33	A35	19.1	6127380.001	Tube 124	1	-	-	-	-	B			
34	A35	19.2	6127381.001	Tube 186	1	-	-	-	-	C			
35	A35	19.3	6127382.001	Tube 248	1	-	-	-	-	D			
36	A35	19.4	6127383.001	Tube 310	1	-	-	-	-	E			
37	A35	20.1	6127396.001	Axle 124	1	-	-	-	-	B			
38	A35	20.2	6127397.001	Axle 186	1	-	-	-	-	C			
39	A35	20.3	6127398.001	Axle 248	1	-	-	-	-	D			
40	A35	20.4	6127399.001	Axle 310	1	-	-	-	-	E			
41	A35	6.1	6127429.001	Axle	1	-	-	-	-	B			
42	A35	6.2	6127430.001	Axle	1	-	-	-	-	C			
43	A35	6.3	6127431.001	Axle	1	-	-	-	-	D			
44	A35	6.4	6127432.001	Axle	1	-	-	-	-	E			
45	A35	16	6127433.001	Strip	1	-	-	-	-				
46	A35	12	6127700.001	Side Plate	1	-	-	-	-				
47	A35	10	6127702.001	Bearing Bracket	1	-	-	-	-				
48	A35	11	6127703.001	Bearing Bracket	1	-	-	-	-				
49	A35	15.1	6127705.001	Wedge 124	1	-	-	-	-	B			
50	A35	15.2	6127706.001	Wedge 186	1	-	-	-	-	C			
51	A35	15.3	6127707.001	Wedge 248	1	-	-	-	-	D			
52	A35	15.4	6127708.001	Wedge 310	1	-	-	-	-	E			

PU Package unit

Note

L Left

R Right

B Working width 124 mm

C Working width 186 mm

D Working width 248 mm

E Working width 310 mm

SPR Recommendation

A - wearing parts and accessories

B - recommended spare parts for quick repair

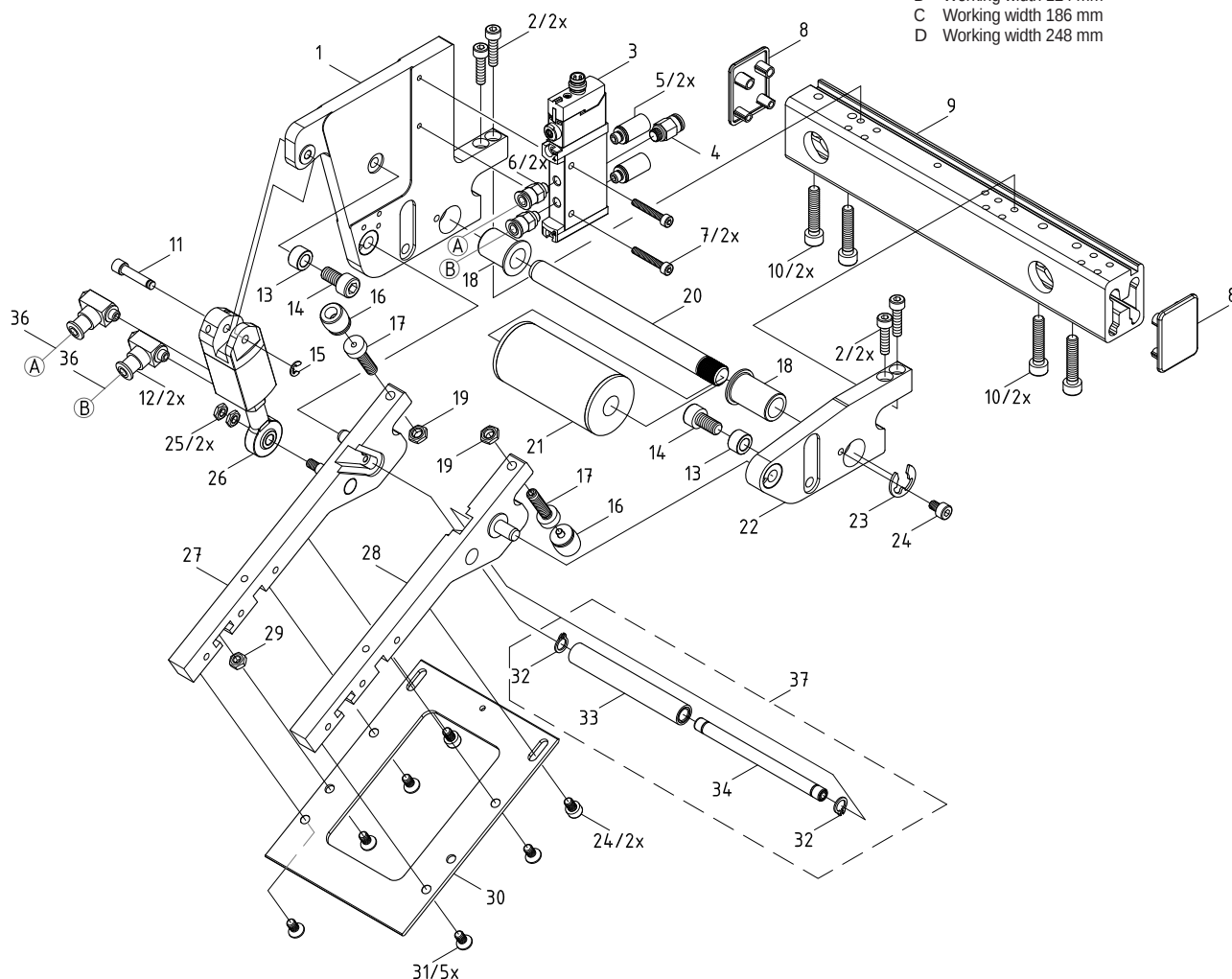
C - recommended spare parts for distributors

D - recommended spare parts for central stores

A17.32 Peel-off plate pivoted - Working width 62 / 124 mm

No	Part No.	Description	PU	Note	Time code		No	Part No.	Description	PU	Note	Time code	
					from	to						from	to
1.1	6127492.001	Plate	1	L			23	5903549.001	E-Ring DIN6799-8	10			
1.2	6127493.001	Plate	1	R			24	5902925.001	Screw DIN912-M4x6	10			
2	5902452.001	Screw DIN912-M4x16	10				25	5902582.001	Nut DIN439-M4	10			
3	5907484.001	Magnetic Valve	1				26	6120228.001	Cylinder	1			
4	5905640.001	Push-in/threaded Fitting	1				27.1	6127499.001	Arm	1	L/E		
5	5906020.001	Silencer	1				27.2	6127500.001	Arm	1	R/E*		
6	5905251.001	Push-in/threaded Fitting	1				27.3	6127511.001	Arm	1	L/F		
7	5902848.001	Screw DIN912-M3x20	10				27.4	6127512.001	Arm	1	R/F*		
8	5972332.001	Cover	1				28.1	6127501.001	Arm	1	E*		
9.1	6127323.001	Profile	1	L*			28.2	6127502.001	Arm	1	R/E		
9.2	6127327.001	Profile	1	R*			28.3	6127513.001	Arm	1	L/F*		
10	5902455.001	Screw DIN912 M5x25	10				28.4	6127514.001	Arm	1	R/F		
11	6120225.001	Bolt	1				29	5902593.001	Nut DIN934-M4	10			
12	5906636.001	One-way Flow Control Valve	1				30.1	6127339.001	Dispense Plate	1	A/E		
13	5905239.001	Friction Bearing d=6	10				30.2	6127340.001	Dispense Plate	1	B/E		
14	5902944.001	Screw DIN912-M6x12	10				30.5	6127344.001	Dispense Plate	1	A/F		
15	5903568.001	E-Ring DIN6799-3.2	10				30.6	6127345.001	Dispense Plate	1	B/F		
16	5907658.001	Damper	10				31	5902846.001	Screw DIN7991-M4x8	10			
17	6127485.001	Setting Screw	1				32	5903552.001	Snap Ring DIN471-6	10			
18	5901172.001	Friction Bearing d=10	10				33.1	6120263.001	Tube	1	A		
19	5902598.001	Nut DIN439-M5	10				33.2	6120258.001	Tube	1	B		
20.1	6127428.001	Axle	1	A			34.1	6120265.001	Axle	1	A		
20.2	6127429.001	Axle	1	B			34.2	6120260.001	Axle	1	B		
21.1	5907559.001	Belt Roller	1	A			36	5966460.001	Tube Ø4	2m			
21.2	5907561.001	Belt Roller	1	B			37.1	6120261.001	Belt Roller	1	A		
22.1	6127495.001	Plate	1	L*			37.2	6120256.001	Belt Roller	1	B		
22.2	6127496.001	Plate	1	R*									

Note L Left version E Length 100 mm
R Right version F Length 160 mm
A Working width 62 mm * only A and B
B Working width 124 mm
C Working width 186 mm
D Working width 248 mm

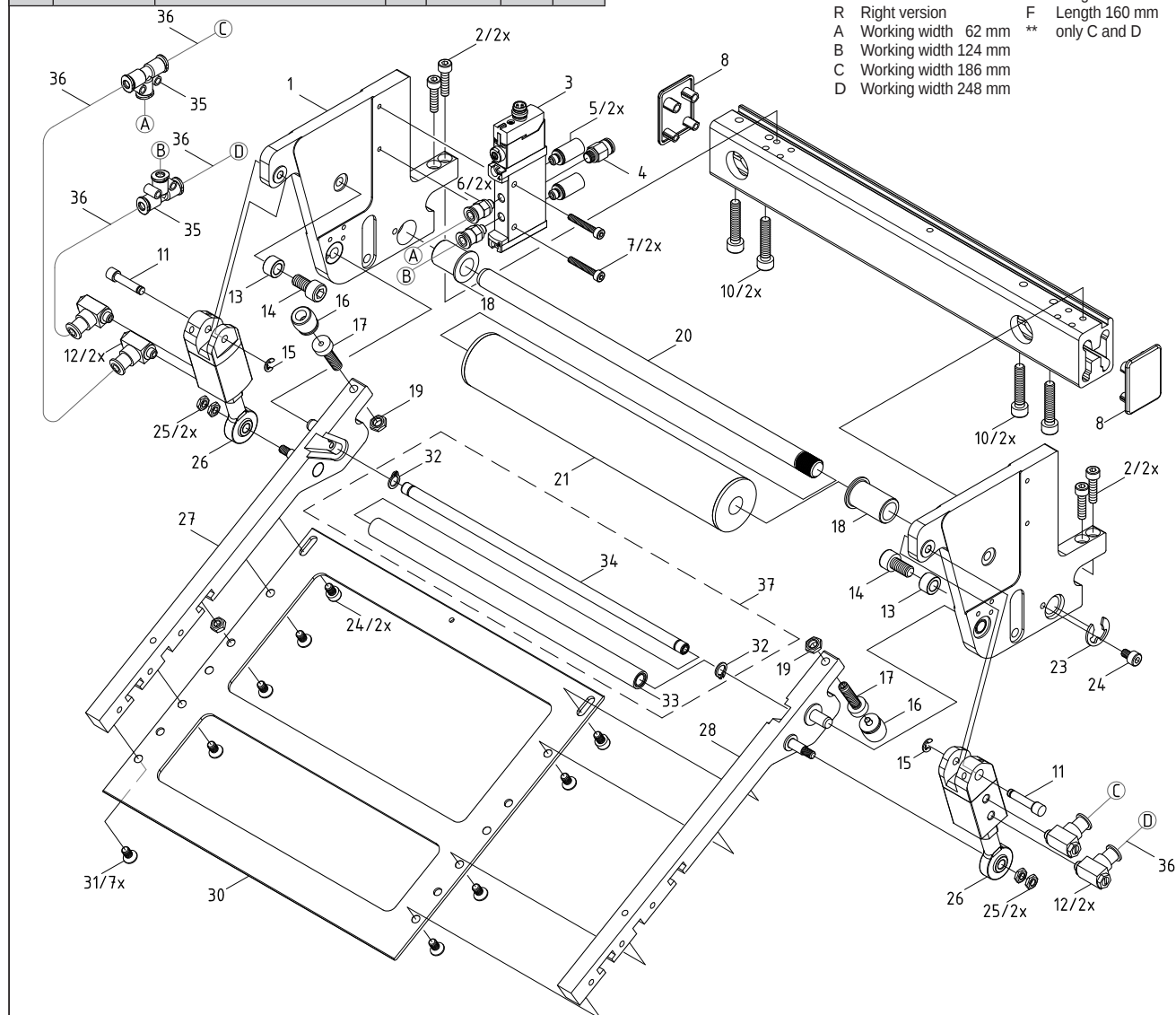


A17.33 Peel-off plate pivoted - Working width 186 / 248 mm

No	Part No.	Description	PU	Note	Time code	
					from	to
1.1	6127492.001	Platine	1	L		
1.2	6127493.001	Platine	1	R		
2	5902452.001	Schraube DIN912-M4x16	10			
3	5907484.001	Magnetventil	1			
4	5905640.001	Steckverschraubung	1			
5	5906020.001	Schalldämpfer	1			
6	5905251.001	Steckverschraubung	1			
7	5902848.001	Schraube DIN912-M3x20	10			
8	5972332.001	Kappe	1			
9.3	6127324.001	Profil	1	L/C		
9.4	6127328.001	Profil	1	R/C		
9.5	6127325.001	Profil	1	L/D		
9.6	6127329.001	Profil	1	R/D		
10	5902455.001	Schraube DIN912 M5x25	10			
11	6120225.001	Bolzen	1			
12	5906636.001	Drossel-Rückschlagventil	1			
13	5905239.001	Gleitlager d=6	10			
14	5902944.001	Schraube DIN912-M6x12	10			
15	5903568.001	Sicherungsscheibe DIN6799-3,2	10			
16	5907658.001	Dämpfer	10			
17	6127485.001	Stellschraube	1			
18	5901172.001	Gleitlager d=10	10			
19	5902598.001	Mutter DIN439-M5	10			
20.3	6127430.001	Achse	1	C		
20.4	6127431.001	Achse	1	D		
21.3	5907562.001	Umlenkrolle	1	C		
21.4	5907563.001	Umlenkrolle	1	D		

No	Part No.	Description	PU	Note	Time code	
					from	to
22.3	6127508.001	Platine	1	L**		
22.4	6127507.001	Platine	1	R**		
23	5903549.001	Sicherungsscheibe DIN6799-8	10			
24	5902925.001	Schraube DIN912-M4x6	10			
25	5902582.001	Mutter DIN439-M4	10			
26	6120228.001	Zylinder	1			
27.1	6127499.001	Arm	1	L/E R/E**		
27.3	6127511.001	Arm	1	L/F R/F**		
28.2	6127502.001	Arm	1	L/E** R/E		
28.4	6127514.001	Arm	1	L/F** R/F		
29	5902593.001	Mutter DIN934-M4	10			
30.3	6127341.001	Spendeblech	1	C/E		
30.4	6127342.001	Spendeblech	1	D/E		
30.7	6127346.001	Spendeblech	1	C/F		
30.8	6127347.001	Spendeblech	1	D/F		
31	5902846.001	Schraube DIN7991-M4x8	10			
32	5903552.001	Sicherungsring DIN471-6	10			
33.3	6120268.001	Rohr	1	C		
33.4	6120273.001	Rohr	1	D		
34.3	6120270.001	Achse	1	C		
34.4	6120275.001	Achse	1	D		
35	5905592.001	T-Steckverbindung	1			
36	5966460.001	Schlauch Ø4	2m			
37.3	6120266.001	Belt Roller	1	C		
37.4	6120271.001	Belt Roller	1	D		

Note L Left version
R Right version
A Working width 62 mm
B Working width 124 mm
C Working width 186 mm
D Working width 248 mm
E Length 100 mm
F Length 160 mm
** only C and D



A17.34 Peel-off plate pivoted - Spare Parts Index

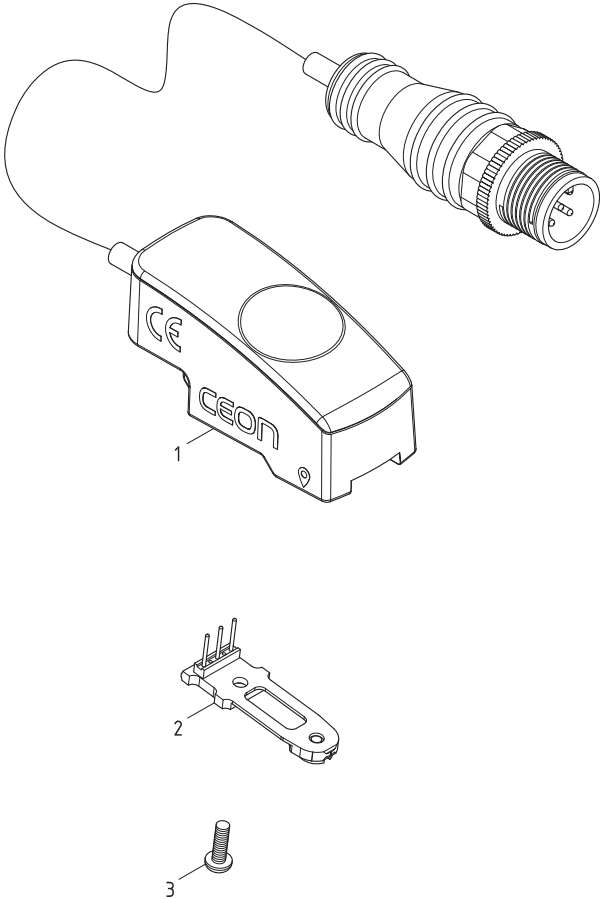
Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
1	A37	A38	18	5901172.001	Friction Bearing d=10	10							
2	A37	A38	2	5902452.001	Screw DIN912-M4x16	10							
3	A37	A38	10	5902455.001	Screw DIN912 M5x25	10							
4	A37	A38	25	5902582.001	Nut DIN439-M4	10							
5	A37	A38	29	5902593.001	Nut DIN934-M4	10							
6	A37	A38	19	5902598.001	Nut DIN439-M5	10							
7	A37	A38	31	5902846.001	Screw DIN7991-M4x8	10							
8	A37	A38	7	5902848.001	Screw DIN912-M3x20	10							
9	A37	A38	24	5902925.001	Screw DIN912-M4x6	10							
10	A37	A38	14	5902944.001	Screw DIN912-M612	10							
11	A37	A38	23	5903549.001	E-Ring DIN6799-8	10							
12	A37	A38	32	5903552.001	Snap Ring DIN471-6	10							
13	A37	A38	15	5903568.001	E-Ring DIN6799-3.2	10							
14	A37	A38	13	5905239.001	Friction Bearing d=6	10							
15	A37	A38	6	5905251.001	Push-in/threaded Fitting	1							
16		A38	35	5905592.001	Push-in T-Connector	1							
17	A37	A38	4	5905640.001	Push-in/threaded Fitting	1							
18	A37	A38	5	5906020.001	Silencer	1							
19	A37	A38	12	5906636.001	One-way Flow Control Valve	1							
20	A37	A38	3	5907484.001	Magnetic Valve	1							
21	A37		21.1	5907559.001	Belt Roller	1					A		
22	A37		21.2	5907561.001	Belt Roller	1					B		
23		A38	21.3	5907562.001	Belt Roller	1					C		
24		A38	21.4	5907563.001	Belt Roller	1					D		
25	A37	A38	16	5907658.001	Damper	10							
26	A37	A38	36	5966460.001	Tube Ø4	2m							
27	A37	A38	8	5972332.001	Cover	1							
28	A37	A38	11	6120225.001	Bolt	1							
29	A37	A38	26	6120228.001	Cylinder	1							
30	A37		37.2	6120256.001	Belt Roller	1					B		
31	A37		33.2	6120258.001	Tube	1					B		
32	A37		34.2	6120260.001	Axle	1					B		
33	A37		37.1	6120261.001	Belt Roller	1					A		
34	A37		33.1	6120263.001	Tube	1					A		
35	A37		34.1	6120265.001	Axle	1					A		
36		A38	37.3	6120266.001	Belt Roller	1					C		
37		A38	33.3	6120268.001	Tube	1					C		
38		A38	34.3	6120270.001	Axle	1					C		
39		A38	37.4	6120271.001	Belt Roller	1					D		
40		A38	33.4	6120273.001	Tube	1					D		
41		A38	34.4	6120275.001	Axle	1					D		
42	A37		9.1	6127323.001	Profile	1					L/A/B		
43		A38	9.3	6127324.001	Profile	1					L/C		
44		A38	9.5	6127325.001	Profile	1					L/D		
45	A37		9.2	6127327.001	Profile	1					R/A/B		
46		A38	9.4	6127328.001	Profile	1					R/C		
47		A38	9.6	6127329.001	Profile	1					R/D		
48	A37		30.1	6127339.001	Dispense Plate	1					A/E		
49	A37		30.2	6127340.001	Dispense Plate	1					B/E		
50		A38	30.3	6127341.001	Dispense Plate	1					C/E		
51		A38	30.4	6127342.001	Dispense Plate	1					D/E		
52	A37		30.5	6127344.001	Dispense Plate	1					A/F		
53	A37		30.6	6127345.001	Dispense Plate	1					B/F		
54		A38	30.7	6127346.001	Dispense Plate	1					C/F		
55		A38	30.8	6127347.001	Dispense Plate	1					D/F		

A17.32 Peel-off plate pivoted - Spare Parts Index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
56	A37		20.1	6127428.001	Axle	1					A		
57	A37		20.2	6127429.001	Axle	1					B		
58		A38	20.3	6127430.001	Axle	1					C		
59		A38	20.4	6127431.001	Axle	1					D		
60	A37	A38	17	6127485.001	Setting Screw	1							
61	A37	A38	1.1	6127492.001	Plate	1					L		
62	A37	A38	1.2	6127493.001	Plate	1					R		
63	A37		22.1	6127495.001	Plate	1					L/A/B		
64	A37		22.2	6127496.001	Plate	1					R/A/B		
65	A37	A38	27.1	6127499.001	Arm	1					L/E R/E/C/D		
66	A37	A38	27.2	6127500.001	Arm	1					R/E/A/B		
67	A37	A38	28.1	6127501.001	Arm	1					E/A/B		
68	A37	A38	28.2	6127502.001	Arm	1					L/E/C/D R/E		
69		A38	22.4	6127507.001	Plate	1					R/C/D		
70		A38	22.3	6127508.001	Plate	1					L/C/D		
71	A37	A38	27.3	6127511.001	Arm	1					L/F R/F/C/D		
72	A37	A38	27.4	6127512.001	Arm	1					R/F/A/B		
73	A37	A38	28.3	6127513.001	Arm	1					L/F/A/B		
74	A37	A38	28.4	6127514.001	Arm	1					L/F/C/D R/F		

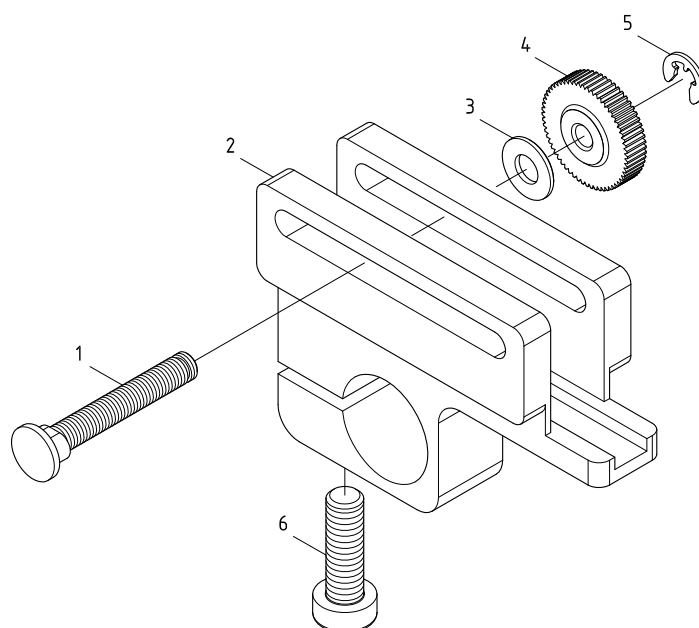
A17.35 Label sensor CEON

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5977649.001	Casing	1			
2	5983437.001	Pick-up head	1			
3	5902904.001	EJOT-PT-Screw K18x6	10			



A17.36 Sensor fixing for Forked light barrier

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5972607.001	Axle	1			
2	5972492.001	Sensor fixing base body	1			
3	5903122.001	Washer DIN125-A4.3	10			
4	5907411.001	Knurled Nut	1			
5	5903568.001	E-Ring DIN6799-3.2	10			
6	5902476.001	Screw DIN7984-M5x12	10			



A17 Spare parts

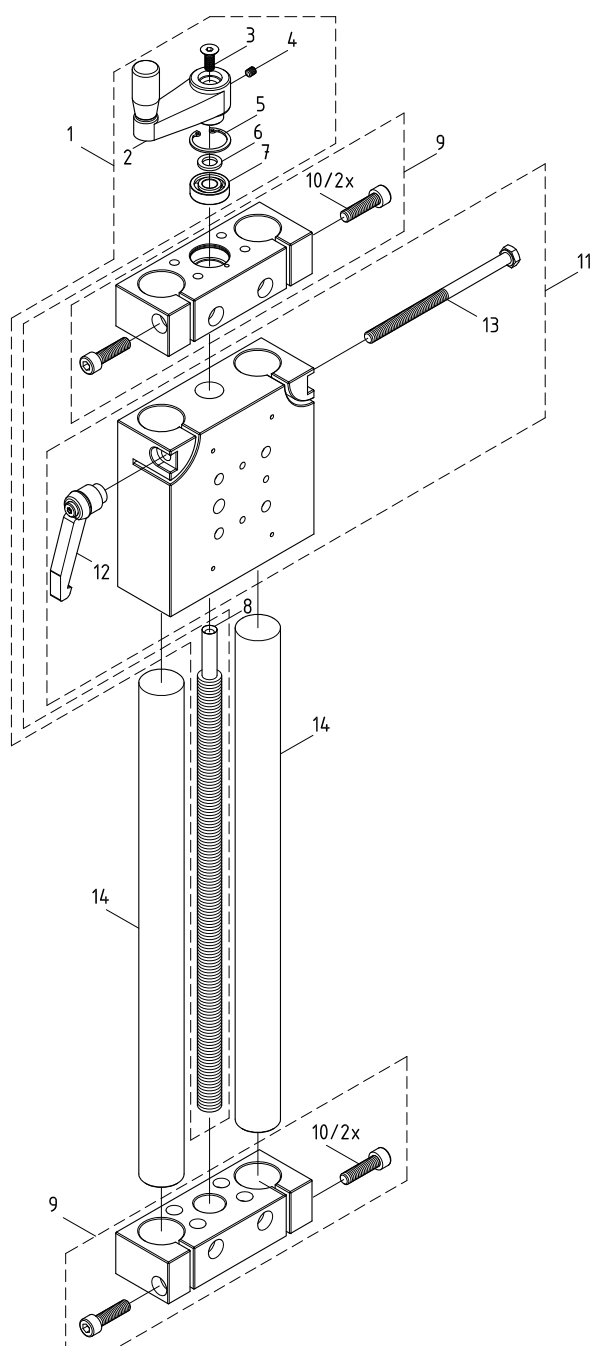
A43

A17.37 Column stand - Single-axe

No	Part No.	Description	PU	Note	Time code	
					from	to
1.1	5972697.001	Spindle	1	A		
1.2	5972110.001	Spindle	1	B		
1.3	5971398.001	Spindle	1	C		
2	5972107.001	Crank Lever	1			
3	5902929.001	Screw DIN7991 M6x16	10			
4	5904578.001	Set Screw DIN913-M5x6	10			
5	5903576.001	Snap Ring DIN472 26	10			
6	5903140.001	Washer DIN988- 10x16x2	10			
7	5901049.001	Ball Bearing DIN625-6000	1			
8.1	5972698.001	Spindle Axle	1	A		
8.2	5972093.001	Spindle Axle	1	B		
8.3	5971397.001	Spindle Axle	1	C		

No	Part No.	Description	PU	Note	Time code	
					from	to
9	5972078.001	Guiding B	1			
10	5902931.001	Screw DIN912 M8x30	10			
11	5972091.001	Guiding A	1	A,B,C		
12	5907200.001	Clamp	1			
13	5902905.001	Screw DIN931-M8x130	10			
14.1	5972696.001	Rod	1	A		
14.2	5972106.001	Rod	1	B		
14.3	5971384.001	Rod	1	C		

A	D30 H400
B	D30 H600
C	D30 H800



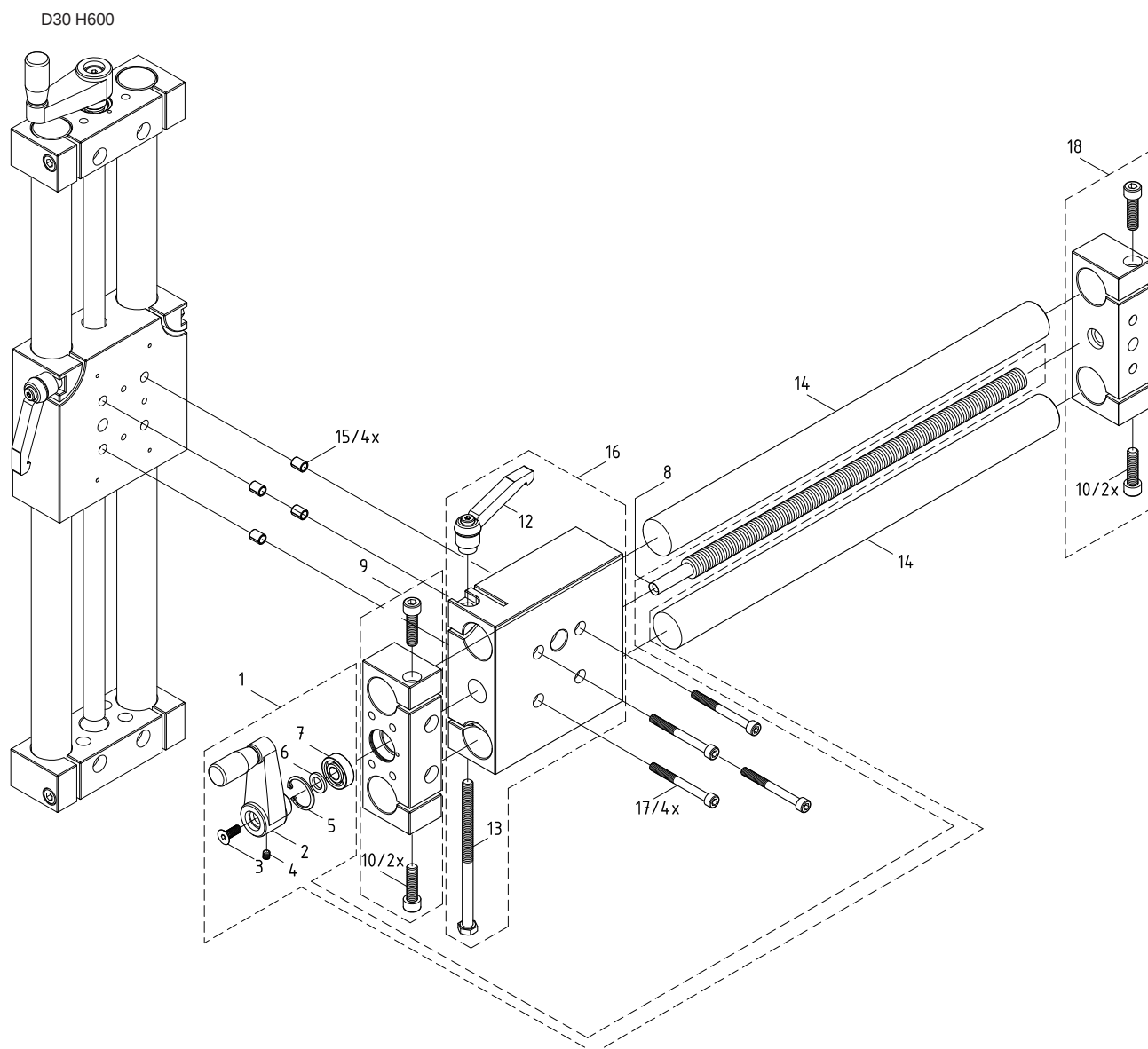
A17.38 Column stand - Two-axe

No	Part No.	Description	PU	Note	Time code	
					from	to
1.1	5972697.001	Spindle	1	D		
1.2	5972110.001	Spindle	1	E		
2	5972107.001	Crank Lever	1			
3	5902929.001	Screw DIN7991 M6x16	10			
4	5904578.001	Set Screw DIN913-M5x6	10			
5	5903576.001	Snap Ring DIN472 26	10			
6	5903140.001	Washer DIN988- 10x16x2	10			
7	5901049.001	Ball Bearing DIN625-6000	1			
8.1	5972698.001	Spindle Axle	1	D		
8.2	5972093.001	Spindle Axle	1	E		

No	Part No.	Description	PU	Note	Time code	
					from	to
9	5972078.001	Guiding B	1			
10	5902931.001	Screw DIN912 M8x30	10			
12	5907200.001	Clamp	1			
13	5902905.001	Screw DIN931-M8x130	10			
14.1	5972696.001	Rod	1	D		
14.2	5972106.001	Rod	1	E		
15	5907227.001	Bushing 6x8x10	10	D,E		
16	5971238.001	Guiding A	1			
17	5909213.001	Screw DIN912 M6x60	10	D,E		
18	5972624.001	Guiding B	1			

D D30 H600 B400

E D30 H600 B600



A17.39 Column stand - Spare parts index

Pos.	Figure/Page		No.	Part No.	Description	PU	SPR				Notes	Time code	
												from	to
1	A43	A44	7	5901049.001	Ball Bearing DIN625-6000-2RS	1							
2	A43	A44	13	5902905.001	Screw DIN931-M8x130	10							
3	A43	A44	3	5902929.001	Screw DIN7991 M6x16	10							
4	A43	A44	10	5902931.001	Screw DIN912 M8x30	10							
5	A43	A44	6	5903140.001	Washer DIN988- 10x16x2	10							
6	A43	A44	5	5903576.001	Snap Ring DIN472 26	10							
7	A43	A44	4	5904578.001	Set Screw DIN913-M5x6	10							
8	A43	A44	12	5907200.001	Clamp	1							
9		A44	15	5907227.001	Bushing 6x8x10	10					D,E		
10		A44	17	5909213.001	Screw DIN912 M6x60	10					D,E		
11		A44	16	5971238.001	Guiding A	1							
12	A43		14.3	5971384.001	Rod	1					C		
13	A43		8.3	5971397.001	Spindle Axle	1					C		
14	A43		1.3	5971398.001	Spindle	1					C		
15	A43	A44	9	5972078.001	Guiding B	1							
16	A43		11	5972091.001	Guiding A	1					A,B,C		
17	A43	A44	8.2	5972093.001	Spindle Axle	1					B,D,E		
18	A43	A44	14.2	5972106.001	Rod	1					B,D,E		
19	A43	A44	2	5972107.001	Crank Lever	1							
20	A43	A44	1.2	5972110.001	Spindle	1					B,D,E		
21		A44	18	5972624.001	Guiding B	1							
22	A43	A44	14.1	5972696.001	Rod	1					A,D		
23	A43	A44	1.1	5972697.001	Spindle	1					A,D		
24	A43	A44	8.1	5972698.001	Spindle Axle	1					A,D		

PU Package unit

Notes

A D30 H400
 B D30 H600
 C D30 H800
 D D30 H600 B400
 E D30 H600 B600

SPR Recommendation

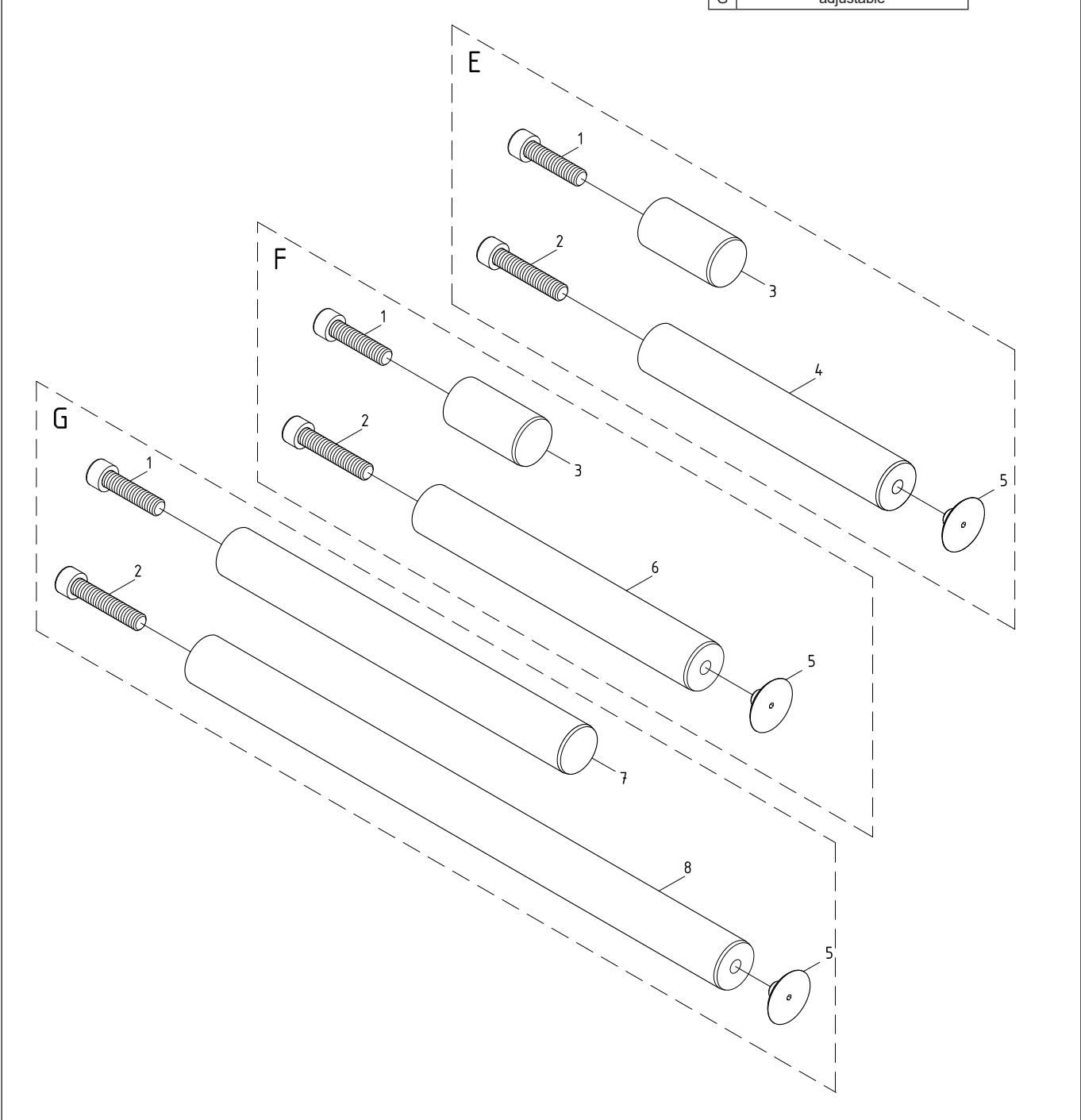
A - wearing parts and accessories
 B - recommended spare parts for quick repair
 C - recommended spare parts for distributors
 D - recommended spare parts for central stores

A17.40 Mounting Columns - fixed or adjustable

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902924.001	Screw DIN912 M10x35	10			
2	5902915.001	Screw DIN912 M10x50	10			
3	5983336.001	Axle	1	E/F		
4.1	5977643.001	Axle	1	A/E		
4.2	5977644.001	Axle	1	B/E		
4.3	5977645.001	Axle	1	C/E		
4.4	5977646.001	Axle	1	D/E		
5	5983265.001	Screw	1			
6.1	5983337.001	Axle	1	A/F		
6.2	5983338.001	Axle	1	B/F		
6.3	5983339.001	Axle	1	C/F		
6.4	5983340.001	Axle	1	D/F		
7	5983341.001	Axle	1	G		

No	Part No.	Description	PU	Note	Time code	
					from	to
8.1	5983342.001	Axle	1	A/G		
8.2	5983343.001	Axle	1	B/G		
8.3	5983344.001	Axle	1	C/G		
8.4	5983345.001	Axle	1	D/G		

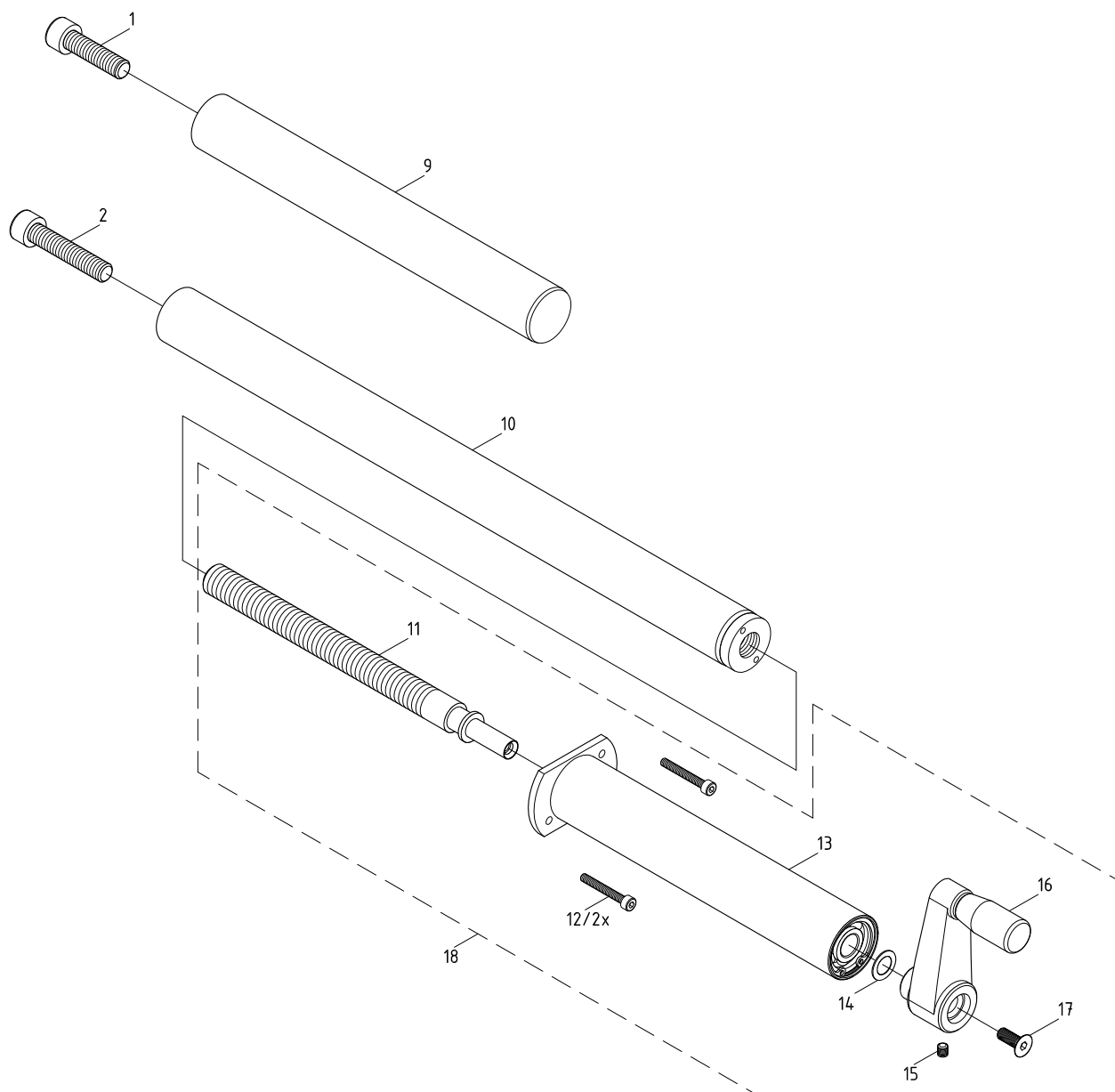
A	Working width 124 mm
B	Working width 186 mm
C	Working width 248 mm
D	Working width 310 mm
E	fixed, not pivoted
F	fixed, pivoted
G	adjustable



A17.41 Mounting Columns - precisely adjustable

No	Part No.	Description	PU	Note	Time code	
					from	to
1	5902924.001	Screw DIN912 M10x35	10			
2	5902915.001	Screw DIN912 M10x50	10			
9	5983346.001	Axle	1			
10.1	5983347.001	Axle	1	A		
10.2	5983348.001	Axle	1	B		
10.3	5983349.001	Axle	1	C		
10.4	5983350.001	Axle	1	D		
11	5971342.001	Spindle	1			
12	5902446.001	Screw DIN912-M4x30	10			
13	5971343.001	Socket	1			
14	5903140.001	Washer DIN988-10x16x2	10			
15	5904578.001	Set Screw DIN913-M5x6	10			
16	5972107.001	Crank Lever	1			
17	5902929.001	Screw DIN7991 M6x16	10			
18	5971341.001	Spindle	1			

A	Working width 124 mm
B	Working width 186 mm
C	Working width 248 mm
D	Working width 310 mm



A17.42 Mounting Columns - Spare parts index

Pos.	Figure/ Page	No.	Part No.	Description	PU	SPR				Notes	Length, absolute	Time code	
												from	to
1		A47	17	5902446.001	Screw DIN912-M4x30	10							
2	A46	A47	2	5902915.001	Screw DIN912 M10x50	10							
3	A46	A47	1	5902924.001	Screw DIN912 M10x35	10							
4		A47	12	5902929.001	Screw DIN7991 M6x16	10							
5		A47	14	5903140.001	Washer DIN988-10x16x2	10							
6		A47	15	5904578.001	Set Screw DIN913-M5x6	10							
7		A47	18	5971341.001	Spindle	1							
8		A47	11	5971342.001	Spindle	1							
9		A47	13	5971343.001	Socket	1							
10		A47	16	5972107.001	Crank Lever	1							
11	A46		4.1	5977643.001	Axle	1				A	189,0 mm		
12	A46		4.2	5977644.001	Axle	1				B	251,0 mm		
13	A46		4.3	5977645.001	Axle	1				C	313,0 mm		
14	A46		4.4	5977646.001	Axle	1				D	375,0 mm		
15	A46		5	5983265.001	Screw	1							
16	A46		3	5983336.001	Axle	1					56,0 mm		
17	A46		6.1	5983337.001	Axle	1				A	215,5 mm		
18	A46		6.2	5983338.001	Axle	1				B	277,5 mm		
19	A46		6.3	5983339.001	Axle	1				C	339,5 mm		
20	A46		6.4	5983340.001	Axle	1				D	401,5 mm		
21	A46		7	5983341.001	Axle	1					270,0 mm		
22	A46		8.1	5983342.001	Axle	1				A	417,5 mm		
23	A46		8.2	5983343.001	Axle	1				B	479,5 mm		
24	A46		8.3	5983344.001	Axle	1				C	541,5 mm		
25	A46		8.4	5983345.001	Axle	1				D	603,5 mm		
26		A47	9	5983346.001	Axle	1					236,0 mm		
27		A47	10.1	5983347.001	Axle	1				A	400,0 mm		
28		A47	10.2	5983348.001	Axle	1				B	462,0 mm		
29		A47	10.3	5983349.001	Axle	1				C	524,0 mm		
30		A47	10.4	5983350.001	Axle	1				D	586,0 mm		

PU Package unit

Notes

A Working width 124 mm

B Working width 186 mm

C Working width 248 mm

D Working width 310 mm

SPR Recommendation

A - wearing parts and accessories

B - recommended spare parts for quick repair

C - recommended spare parts for distributors

D - recommended spare parts for central stores

Labeling head			Structural width	124 mm (4.9")	186 mm (7.3")	248 mm (9.7")	310 mm (12.2")
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/m²	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 interface			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, OPC UA, Ethernet/IP 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 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: 1.0 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 8 Technical Data

A19.1 Extract from the product brochure

Delivery program

Left-hand construction

Pos.	Part no.	Base units
1.1	 6121131	Base unit 124 L
1.2	6121133	Base unit 186 L
1.3	6121135	Base unit 248 L
1.4	6121137	Base unit 310 L
Pos.	Part no.	Unwinders
2.1	 5983300	Unwinder D310 H 124 L
	5983302	Unwinder D310 H 186 L
	5983304	Unwinder D310 H 248 L
	6122000	Unwinder D310 VH 62 L
	5983312	Unwinder D310 V 124 L
	5983314	Unwinder D310 V 186 L
2.2	5983316	Unwinder D310 V 248 L
	5983306	Unwinder D410 H 124 L
	5983308	Unwinder D410 H 186 L
	5983310	Unwinder D410 H 248 L
	6122002	Unwinder D410 VH 62 L
	5983318	Unwinder D410 V 124 L
2.3	5983320	Unwinder D410 V 186 L
	5983322	Unwinder D410 V 248 L
Pos.	Part no.	Unwinders motor-driven
2.3	 5983501	Unwinder D410 H 124 L motor-driven
	5983502	Unwinder D410 H 186 L motor-driven
	5983503	Unwinder D410 H 248 L motor-driven
	5983504	Unwinder D410 H 310 L motor-driven
	5983505	Unwinder D410 V 124 L motor-driven
	5983506	Unwinder D410 V 186 L motor-driven
2.4	5983507	Unwinder D410 V 248 L motor-driven
	5983508	Unwinder D410 V 310 L motor-driven
	5983509	Unwinder D510 H 124 L motor-driven
	5983510	Unwinder D510 H 186 L motor-driven
	5983511	Unwinder D510 H 248 L motor-driven
	5983512	Unwinder D510 V 124 L motor-driven
2.5	5983513	Unwinder D510 V 186 L motor-driven
	5983514	Unwinder D510 V 248 L motor-driven
Pos.	Part no.	Unwinders with a double pendulum
2.5	 5983519	Unwinder D410 H 124 L DP motor-driven
	5983520	Unwinder D410 H 186 L DP motor-driven
	5983521	Unwinder D410 H 248 L DP motor-driven
	5983522	Unwinder D410 V 124 L DP motor-driven
	5983523	Unwinder D410 V 186 L DP motor-driven
	5983524	Unwinder D410 V 248 L DP motor-driven
2.6	5983525	Unwinder D510 H 124 L DP motor-driven
	5983526	Unwinder D510 H 186 L DP motor-driven
	5983527	Unwinder D510 V 124 L DP motor-driven
	5983528	Unwinder D510 V 186 L DP motor-driven

Type code: base unit

Labeling head	186	L
Label web width	62 mm	
	124 mm	
	186 mm	
	248 mm	
	310 mm	
Label application	to the left L	
	to the right R	

Right-hand construction

Pos.	Part no.	Base units
1.1	 6121132	Base unit 124 R
1.2	6121134	Base unit 186 R
1.3	6121136	Base unit 248 R
1.4	6121138	Base unit 310 R
Pos.	Part no.	Unwinders
2.1	 5983301	Unwinder D310 H 124 R
	5983303	Unwinder D310 H 186 R
	5983305	Unwinder D310 H 248 R
	6122001	Unwinder D310 VH 62 R
	5983313	Unwinder D310 V 124 R
	5983315	Unwinder D310 V 186 R
2.2	5983317	Unwinder D310 V 248 R
	5983307	Unwinder D410 H 124 R
	5983309	Unwinder D410 H 186 R
	5983311	Unwinder D410 H 248 R
	6122003	Unwinder D410 VH 62 R
	5983319	Unwinder D410 V 124 R
2.3	5983321	Unwinder D410 V 186 R
	5983323	Unwinder D410 V 248 R
Pos.	Part no.	Unwinders motor-driven
2.3	 5983540	Unwinder D410 H 124 R motor-driven
	5983541	Unwinder D410 H 186 R motor-driven
	5983542	Unwinder D410 H 248 R motor-driven
	5983543	Unwinder D410 H 310 R motor-driven
	5983544	Unwinder D410 V 124 R motor-driven
	5983545	Unwinder D410 V 186 R motor-driven
2.4	5983546	Unwinder D410 V 248 R motor-driven
	5983547	Unwinder D410 V 310 R motor-driven
	5983548	Unwinder D510 H 124 R motor-driven
	5983549	Unwinder D510 H 186 R motor-driven
	5983550	Unwinder D510 H 248 R motor-driven
	5983551	Unwinder D510 V 124 R motor-driven
2.5	5983552	Unwinder D510 V 186 R motor-driven
	5983553	Unwinder D510 V 248 R motor-driven
Pos.	Part no.	Unwinders with a double pendulum
2.5	 5983558	Unwinder D410 H 124 R DP motor-driven
	5983559	Unwinder D410 H 186 R DP motor-driven
	5983560	Unwinder D410 H 248 R DP motor-driven
	5983561	Unwinder D410 V 124 R DP motor-driven
	5983562	Unwinder D410 V 186 R DP motor-driven
	5983563	Unwinder D410 V 248 R DP motor-driven
2.6	5983564	Unwinder D510 H 124 R DP motor-driven
	5983565	Unwinder D510 H 186 R DP motor-driven
	5983566	Unwinder D510 V 124 R DP motor-driven
	5983567	Unwinder D510 V 186 R DP motor-driven

Type code: winders

Unwinder, rewriter	D410	H	124	L	DP
Outside diameter	up to 210 mm				
	290 mm				
	310 mm				
	410 mm				
	510 mm				
	610 mm				
Orientation of assembly	vertical V				
	horizontal H				
Label web width	62 mm				
	124 mm				
	186 mm				
	248 mm				
	310 mm				
Label application	to the left L				
	to the right R				
Pendulum	double				

A19.1 Extract from the product brochure

Delivery program

Left-hand construction

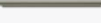
Pos.	Part no.	Rewinders
3.1	6122030	Rewinder D210 62 L
	6122034	Rewinder D210 124 L
	6122038	Rewinder D210 186 L
3.2	6122042	Rewinder D210 248 L
	6122032	Rewinder D290 62 L
	6122036	Rewinder D290 124 L
	6122040	Rewinder D290 186 L
	6122044	Rewinder D290 248 L
Pos.	Part no.	Rewinders motor-driven
3.3	5983531	Rewinder D310 124 L motor-driven
	5983532	Rewinder D310 186 L motor-driven
	5983533	Rewinder D310 248 L motor-driven
	5983534	Rewinder D310 310 L motor-driven
3.4	5983535	Rewinder D410 124 L motor-driven
	5983536	Rewinder D410 186 L motor-driven
	5983537	Rewinder D410 248 L motor-driven
Pos.	Part no.	Peel-off plates standard
4.1	6126000	Peel-off plate 100 mm 62 L
	6126001	Peel-off plate 100 mm 124 L
	6126002	Peel-off plate 100 mm 186 L
	6126003	Peel-off plate 100 mm 248 L
	6126004	Peel-off plate 100 mm 310 L
4.2	6126010	Peel-off plate 160 mm 62 L
	6126011	Peel-off plate 160 mm 124 L
	6126012	Peel-off plate 160 mm 186 L
	6126013	Peel-off plate 160 mm 248 L
	6126014	Peel-off plate 160 mm 310 L
4.3	6127475	Roller enabling smoother web run 62 L
	6127476	Roller enabling smoother web run 124 L
	6127477	Roller enabling smoother web run 186 L
	6127478	Roller enabling smoother web run 248 L
	6127479	Roller enabling smoother web run 310 L
Pos.	Part no.	Peel-off plates adjustable 0° to +75°
4.4	6126020	Peel-off plate 100 mm 62 L adjustable
	6126021	Peel-off plate 100 mm 124 L adjustable
	6126022	Peel-off plate 100 mm 186 L adjustable
	6126023	Peel-off plate 100 mm 248 L adjustable
4.5	6126030	Peel-off plate 160 mm 62 L adjustable
	6126031	Peel-off plate 160 mm 124 L adjustable
	6126032	Peel-off plate 160 mm 186 L adjustable
	6126033	Peel-off plate 160 mm 248 L adjustable
Pos.	Part no.	Peel-off plates pivoted 0° to -30°
4.6	6126060	Peel-off plate 100 mm 62 L pivoted
	6126061	Peel-off plate 100 mm 124 L pivoted
	6126062	Peel-off plate 100 mm 186 L pivoted
	6126063	Peel-off plate 100 mm 248 L pivoted
4.7	6126070	Peel-off plate 160 mm 62 L pivoted
	6126071	Peel-off plate 160 mm 124 L pivoted
	6126072	Peel-off plate 160 mm 186 L pivoted
	6126073	Peel-off plate 160 mm 248 L pivoted
4.8	5955735	Compressed air regulation unit L
Pos.	Part no.	Peel-off plates 75° with a wipe-down roller
4.9	6127800	Peel-off plate 75° L x W: 50 x 42 mm
	6127801	Peel-off plate 75° L x W: 50 x 62 mm
	6127802	Peel-off plate 75° L x W: 50 x 82 mm
	6127803	Peel-off plate 75° L x W: 100 x 82 mm
4.10	6120052	Installation profile for a plate 75° 124 L
	6120056	Installation profile for a plate 75° 186 L
	6120060	Installation profile for a plate 75° 248 L

Right-hand construction

Pos.	Part no.	Rewinders
3.1	6122031	Rewinder D210 62 R
	6122035	Rewinder D210 124 R
	6122039	Rewinder D210 186 R
3.2	6122043	Rewinder D210 248 R
	6122033	Rewinder D290 62 R
	6122037	Rewinder D290 124 R
	6122041	Rewinder D290 186 R
	6122045	Rewinder D290 248 R
Pos.	Part no.	Rewinders motor-driven
3.3	5983570	Rewinder D310 124 R motor-driven
	5983571	Rewinder D310 186 R motor-driven
	5983572	Rewinder D310 248 R motor-driven
	5983573	Rewinder D310 310 R motor-driven
3.4	5983574	Rewinder D410 124 R motor-driven
	5983575	Rewinder D410 186 R motor-driven
	5983576	Rewinder D410 248 R motor-driven
Pos.	Part no.	Peel-off plates standard
4.1	6126005	Peel-off plate 100 mm 62 R
	6126006	Peel-off plate 100 mm 124 R
	6126007	Peel-off plate 100 mm 186 R
	6126008	Peel-off plate 100 mm 248 R
	6126009	Peel-off plate 100 mm 310 R
4.2	6126015	Peel-off plate 160 mm 62 R
	6126016	Peel-off plate 160 mm 124 R
	6126017	Peel-off plate 160 mm 186 R
	6126018	Peel-off plate 160 mm 248 R
	6126019	Peel-off plate 160 mm 310 R
4.3	6127480	Roller enabling smoother web run 62 R
	6127481	Roller enabling smoother web run 124 R
	6127482	Roller enabling smoother web run 186 R
	6127483	Roller enabling smoother web run 248 R
	6127484	Roller enabling smoother web run 310 R
Pos.	Part no.	Peel-off plates adjustable 0° to +75°
4.4	6126025	Peel-off plate 100 mm 62 R adjustable
	6126026	Peel-off plate 100 mm 124 R adjustable
	6126027	Peel-off plate 100 mm 186 R adjustable
	6126028	Peel-off plate 100 mm 248 R adjustable
4.5	6126035	Peel-off plate 160 mm 62 R adjustable
	6126036	Peel-off plate 160 mm 124 R adjustable
	6126037	Peel-off plate 160 mm 186 R adjustable
	6126038	Peel-off plate 160 mm 248 R adjustable
Pos.	Part no.	Peel-off plates pivoted 0° to -30°
4.6	6126065	Peel-off plate 100 mm 62 R pivoted
	6126066	Peel-off plate 100 mm 124 R pivoted
	6126067	Peel-off plate 100 mm 186 R pivoted
	6126068	Peel-off plate 100 mm 248 R pivoted
4.7	6126075	Peel-off plate 160 mm 62 R pivoted
	6126076	Peel-off plate 160 mm 124 R pivoted
	6126077	Peel-off plate 160 mm 186 R pivoted
	6126078	Peel-off plate 160 mm 248 R pivoted
4.8	5955736	Compressed air regulation unit R
Pos.	Part no.	Peel-off plates 75° with a wipe-down roller
4.9	6127800	Peel-off plate 75° L x W: 50 x 42 mm
	6127801	Peel-off plate 75° L x W: 50 x 62 mm
	6127802	Peel-off plate 75° L x W: 50 x 82 mm
	6127803	Peel-off plate 75° L x W: 100 x 82 mm
4.10	6120054	Installation profile for a plate 75° 124 R
	6120058	Installation profile for a plate 75° 186 R
	6120062	Installation profile for a plate 75° 248 R

A19.1 Extract from the product brochure

Delivery program

Pos.		Part no.	Label margin detection
5.1		5983588	Label sensor CEON
5.2		6127425	Retainer bar label sensor CEON on peel-off plate Label web width 62 mm
		6127426	Retainer bar label sensor CEON on peel-off plate Label web width 124 mm
5.3		5918670	Forked light barrier
5.4		5972608	Retainer to assemble forked light barrier
Pos.		Part no.	Software keys
6.1		5581001	Speed key 12 m/min
		5581002	Speed key 25 m/min
		5581003	Speed key 50 m/min
		5581028	Speed key 75 m/min
		5581004	Speed key 100 m/min
		5581005	Speed key 150 m/min
		5581006	Speed key 200 m/min
Pos.		Part no.	Rods to assemble a peel-off plate
7.1		5972443	Assembly rod, diameter 16 mm Distance to the device 0 mm
		5972418	Assembly rod, diameter 16 mm Distance to the device 100 mm
		5972703	Assembly rod, diameter 16 mm Distance to the device 150 mm
		5972419	Assembly rod, diameter 16 mm Distance to the device 200 mm
		5972420	Assembly rod, diameter 16 mm Distance to the device 300 mm
		6120067	Assembly rod, diameter 16 mm Distance to the device 400 mm
		5972421	Assembly rod, diameter 16 mm Distance to the device 600 mm
			In case of labeling head structural widths 124 / 186 → 2x 248 / 310 → 3x
Pos.		Part no.	Product detection
8.1		5918702	Product sensor, light switch up to 200 mm
		5918703	Product sensor, light switch with transparent products up to 80 mm
8.2		5918671	Product sensor cable M12-M8, 4 pin, a-coded, length 2.5 m
Pos.		Part no.	Masterencoder
9.1		5918979	Rotary encoder with cable 2.5 m
9.2		5918475	Extender cable for rotary encoder M12, 5 pin, a-coded, length 2.5 m
		5918942	Extender cable for rotary encoder M12, 5 pin, a-coded, length 10 m
		5918949	Rotary extender cable M12, 5 pin, a-coded, length 5 m
9.3		5918981	Friction wheel for rotary encoder
9.4		5918980	Retainer for rotary encoder

Pos.		Part no.	Power supply cables
10.1		5918758	Power supply cable without Schuko plug Length 2.5 m
		5918947	Power supply cable without Schuko plug Length 5 m
		5918943	Power supply cable without Schuko plug Length 10 m
10.2		5918531	Power supply cable with Schuko plug Length 2.5 m
Pos.		Part no.	Signal cables
10.3		5918421	I/O interface extender cable M12, 17 pin, length 2.5 m
		5918941	I/O interface extender cable M12, 17 pin, length 10 m
		5918948	I/O interface cable M12, 17 pin, length 5 m
10.4		5918940	Signal cable applicator, I/O box, winder I/O M12, 12 pin, length 1 m
10.5		5918477	Signal cable applicator, I/O box, winder I/O M12, 12 pin, length 2.5 m
Pos.		Part no.	LAN cables
10.6		5918665	Ethernet cable M12, 4 pin d-coded to RJ45, length 2.5 m
		5918946	Ethernet cable M12, 4 pin d-coded to RJ45, length 5 m
		5918945	Ethernet cable M12, 4 pin d-coded to RJ45, length 10 m
Pos.		Part no.	USB cables
10.7		5918955	Cable to connect an external operation panel, M12, 12 pin to USB-B, length 5 m
10.8		5918936	USB adapter to connect a memory stick, cable M12, 12 pin to USB-A, length 0.2 m
Pos.		Part no.	Power cables to connect winders or winders with the base unit
10.9		5918944	Power cable, length 0.3 m
		5918879	Power cable, length 0.8 m
		5918426	Power cable, length 2.5 m
Pos.		Part no.	Interfaces
11.1		6121010	I/O box M12, 12 pin and 12 x M8, 3 pin to connect base unit
		6121030	Module IXOR-Powerbus to connect motor-driven winders
Pos.		Part no.	Counterholders
12.1		5983324	Counterholder 310 mm
		5983325	Counterholder 410 mm
		5983586	Counterholder 510 mm
Pos.		Part no.	Cover plate
13.1		5983429	Cover plate

A19.1 Extract from the product brochure

Delivery program

Pos.	Part no.	Circular connectors
14.1		5918479 Cable plug M12, 5 pin, a-coded, male
		5918483 Cable plug M12, 12 pin, male
14.2		5918480 Cable jack M12, 5 pin, a-coded, female
		5918484 Cable jack M12, 12 pin, female
Pos.	Part no.	Signal
15.1		5971223 Warning light with cable length 2.5 m M12, 17 pin
Pos.	Part no.	External operation panel
16.1		6121020 External operation panel 4.3"
Pos.	Part no.	Wipe-down systems
17.1		Wipe-down rollers for peel-off plates standard, adjustable and pivoted
		6126150 Wipe-down roller 62
		6126151 Wipe-down roller 124
		6126152 Wipe-down roller 186
		6126153 Wipe-down roller 248
		Wipe-down brushes for peel-off plates standard, adjustable and pivoted
		6126160 Wipe-down brush 62
		6126161 Wipe-down brush 124
		6126162 Wipe-down brush 186
		6126163 Wipe-down brush 248
		6126164 Wipe-down brush 310
Pos.	Part no.	Assembly aids
18.1		6120016 Fixing bar compact to pick up motor-driven winders and base unit
18.2		6120015 Fixing bar universal to pick up motor-driven winders and base unit
Pos.	Part no.	Deflection rollers
19.1		6127290 Deflection roller 62 D30 AL
		6127291 Deflection roller 124 D30 AL
		6127292 Deflection roller 186 D30 AL
		6127293 Deflection roller 248 D30 AL
		6127294 Deflection roller 310 D30 AL
		6127295 Deflection roller 62 D38 AL
		6127296 Deflection roller 124 D38 AL
		6127297 Deflection roller 186 D38 AL
		6127298 Deflection roller 248 D38 AL
		6127299 Deflection roller 310 D38 AL
		6127311 Deflection roller 62 D60 AL
		6127312 Deflection roller 124 D60 AL
		6127313 Deflection roller 186 D60 AL
		6127314 Deflection roller 248 D60 AL
		6127315 Deflection roller 310 D60 AL
Pos.	Part no.	Spacer
20.1		6120018 Spacer for motor-driven winder

Pos.	Part no.	Device retainers
21.1		5983401 Device 124 fixed
		5983402 Device 186 fixed
		5983403 Device 248 fixed
		5983404 Device 310 fixed
		5983405 Device 124 fixed, pivoted
		5983406 Device 186 fixed, pivoted
		5983407 Device 248 fixed, pivoted
		5983408 Device 310 fixed, pivoted
		5983409 Device 124 moveable
		5983410 Device 186 moveable
		5983411 Device 248 moveable
		5983412 Device 310 moveable
21.2		5983413 Device 124 precisely adjustable
		5983414 Device 186 precisely adjustable
		5983415 Device 248 precisely adjustable
		5983416 Device 310 precisely adjustable
21.3		5983413 Device 124 precisely adjustable
		5983414 Device 186 precisely adjustable
21.4		5983415 Device 248 precisely adjustable
		5983416 Device 310 precisely adjustable
Pos.	Part no.	Device retainers - special equipment
21.4		5971614 Pivoted retainer
21.5		5983431 Digital counter, vertical axis
		5983432 Digital counter, horizontal axis
21.6		5983428 Digital counter extender (for device retainers and stands)
Pos.	Part no.	Stands
22.1		5983420 Column stand diameter 30 mm, one axis, height 400 mm
		5983421 Column stand diameter 30 mm, one axis, height 600 mm
		5983422 Column stand diameter 30 mm, one axis, height 800 mm
22.2		5983423 Column stand diameter 30 mm, two axes, height 600 mm, width 400 mm
		5983424 Column stand diameter 30 mm, two axes, height 600 mm, width 600 mm
22.3		5983425 Floor stand 1632 vertical column stand included diameter 30 mm, height 800 mm
22.4		5983426 Floor stand 1231 horizontal column stand included diameter 30 mm, height 600 mm
Pos.	Part no.	Stands - special equipment
22.5		5983427 Angular gear
22.6		5983417 Digital counter, vertical axis
		5983418 Digital counter, horizontal axis
22.7		5972532 Adjusting disc

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