

## Assembly Instructions



Stroke-Turn Applicator

# 4214

Family	Type
Stroke-turn applicator	4214L-200
	4214L-300
	4214L-400
	4214R-200
	4214R-300
	4214R-400

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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 manual.
- The device applicator mounted on a cab printer of the HERMES Q and Hermes+ series 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 manual, including the manufacturer's maintenance recommendations and specifications.



### Note!

The complete and current version of the documentation can be found in the Internet.

## 1.3 Safety Instructions



### Attention!

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

▷ Service Manual



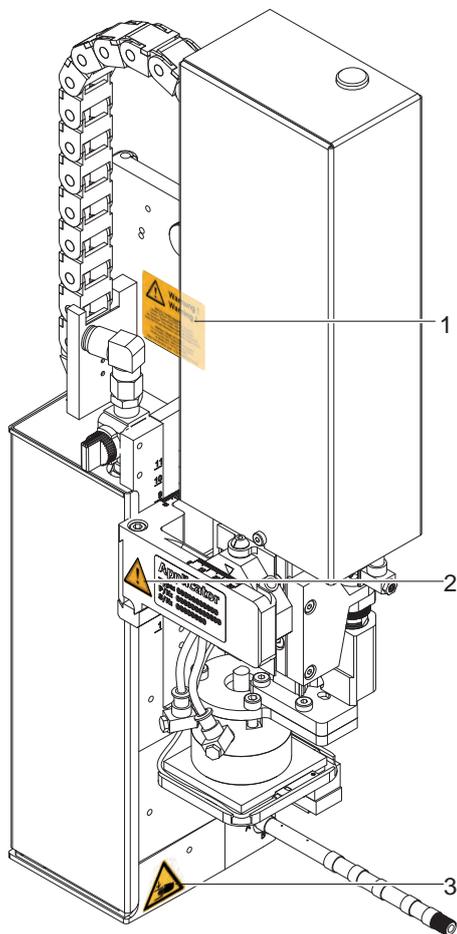
### Warning!

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

- Before mounting the delivered components disconnect the printer 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 the applicator.

- In operation, moving parts are easily accessible. This applies especially for the zone, where the pad is moved between the starting and the labelling position. During operation do not reach into that zone and keep long hair, loose clothes, and jewelry away. Before any manipulations in those areas, close the shutoff valve.
- 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 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 by 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 danger. Warning stickers must therefore not be removed, as then you and other people will not be aware of potential threats and may be injured.

1.4 Safety Marking



- 1:  Warning of damages by moving parts!
  - 2:  Cylinder is under pressure, also if it is switched off.  
Possibility of residual energy!
  - 3:  Danger of crushing hands and fingers by the moving pad!
- Attention!**  
Never remove or cover safety markings!  
Replace them in the case of damage!

Fig. 1 Safety marking

1.5 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 print module enables it to be easily disassembled into its component parts.
- ▶ Send the parts for recycling.

## 2.1 Important Features

- The supporting air, the vacuum as well as the speed of the cylinder are adjustable. That way the applicator can be adapted to different label materials and sizes.
- To avoid contamination within the vacuum channels, tamps are cleaned by an air pressure pulses after each application.
- For operation within a system the I/O interface of the printer can be used.

## 2.2 Technical Data

Label transfer method		Tamp pad	Tamp pad with foam	Tamp pad with label stop	Blow pad
		4214 L/R 11 F	4214 L/R 12 F	4214 L/R 61 F	4214 L/R 2100
Label width	HERMES Q2 / Hermes+2	4 - 58	10 - 58	10 - 58	10 - 58
in mm for	HERMES Q4 / Hermes+4	10 - 80	10 - 80	10 - 80	10 - 80
Label height	HERMES Q2 / Hermes+2	4 - 40	4 - 40	4 - 40	10 - 40
in mm for	HERMES Q4 / Hermes+4	8 - 40	8 - 40	8 - 40	10 - 40
Compressed air pressure		0,45 MPa (4,5 bar)			
Sound pressure level		unter 74 dB(A)			
Product during labeling	fixed	■	■	■	■
	in motion	-	-	-	■
Labeling onto the product	from the top	■	■	■	■
	from below	■	■	■	■
	sideways	■	■	■	■
Product height	fixed	-	-	-	■
	variable	■	■	■	-
Horizontal swing angle 90°, 180°, 0°		■	■	■	■
Product distance to lower edge					
at cylinder stroke	200 mm up to mm	135	135	135	140
	300 mm up to mm	235	235	235	240
	400 mm up to mm	335	335	335	340
Immersion depth pad F <sup>2)</sup>	up to mm	65	65	65	-
Cycle time about frequency/min. <sup>1)</sup>		25	25	25	25

Table 1 Technical Data

<sup>1)</sup> Determined at 100 mm stroke below device / smallest label height / print speed 100 mm/s.

<sup>2)</sup> Immersion depth at applicator >25 mm, the cover of the HERMES Q / Hermes+ must be modified.

2.3 Overview

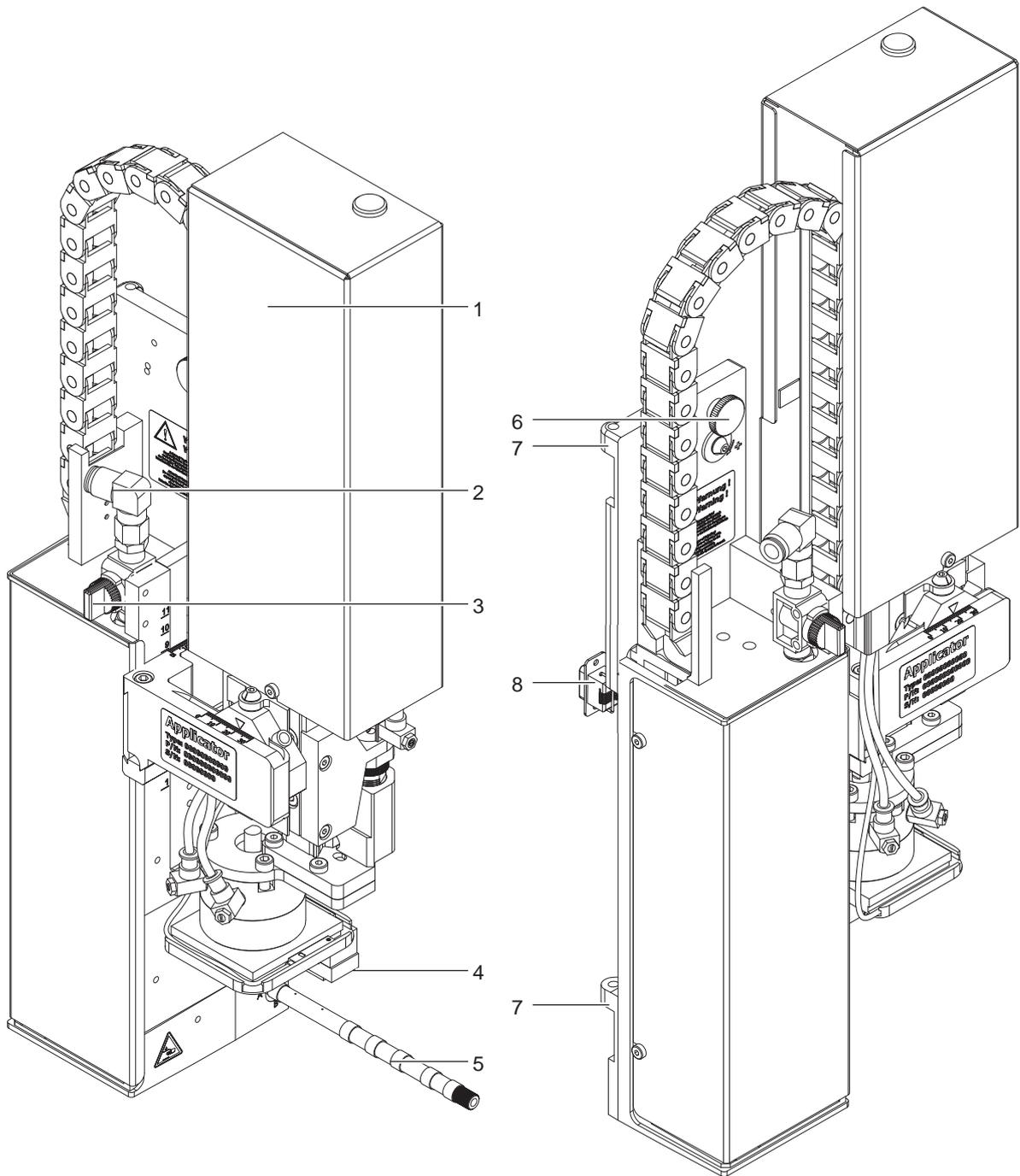
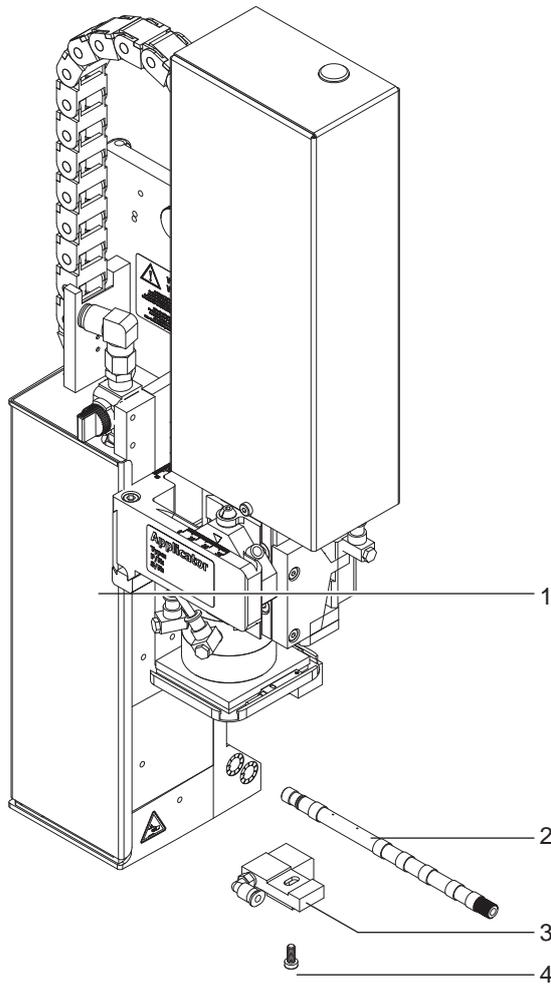


Fig. 2 Device overview

- |                            |   |
|----------------------------|---|
| 1 Cover                    | 5 Blow tube for supporting air                              |
| 2 Compressed air connector | 6 Knurled screw for attaching the applicator to the printer |
| 3 Shutoff valve            | 7 Hinges  |
| 4 Pad (customized)         | 8 SUB-D 15 Connector - elec. connection applicator-printer  |

## 2.4 Contents of Delivery



- 1 Applicator
- 2 Blow tube (as ordered)
- 3 Pad (as ordered)
- 4 Screws (part of the pad)
- 5 Documentation

Fig. 3 Contents of delivery

**Note!**

Please keep the original packaging in case the applicator must be returned.

**Attention!**

The device and printing materials will be damaged by moisture and wetness.

- ▶ Set up label printer with applicator only in dry locations protected from splash water.

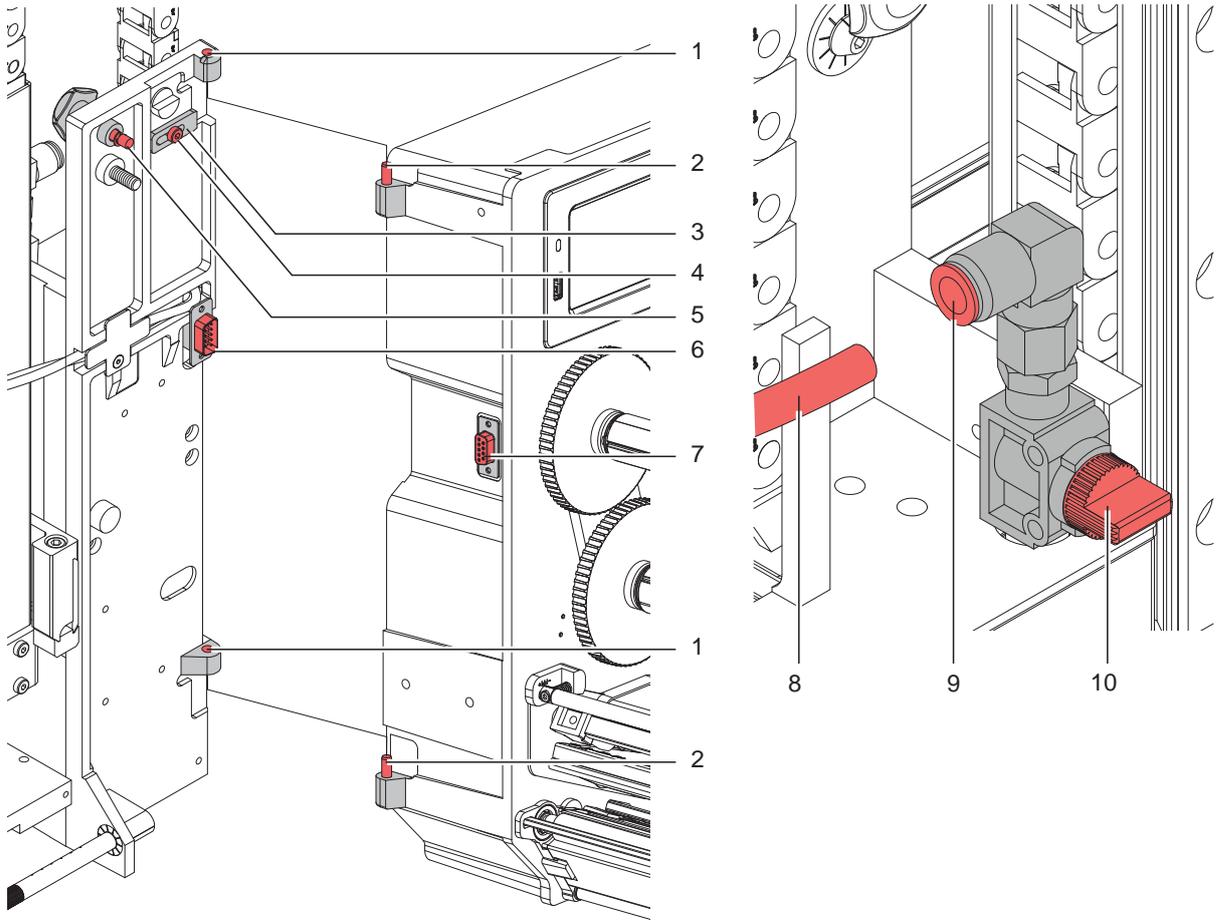


Fig. 4 Mounting applicator on printer



### Attention!

Initiation, adjustments and changing of parts is only for qualified service personal only.

▷ Service Manual

#### Mount the applicator

1. Hang the applicator with the female part of hinges (1) at the printer mounted hinges parts (2).
2. Connect SUB-D 15 male connector (6) to the female connector (7) of the printer.
3. To prevent the applicator from slipping out of the hinges loosen screw (4) and move the locking plate (3) under the hinges and tighten screw (4).
4. Swing the applicator to the printer and tighten the thumbscrew (5).
5. Keep the external compressed air supply closed and close the shut-off valve (10) on the applicator ▷ see illustration
6. Insert external compressed air supply (8) into the plug connector (9) on the shut-off valve (10).
7. Switch on compressed air and open shut-off valve (10) by turning 90 °.

For cleaning the applicator and printer it's sometime necessary to turn away or/and dismount the applicator. Don't change the adjustments of setting screws, throttle valves or other.

#### Turn away/Dismount the applicator

8. To turn away the applicator loosen thumbscrew (5) and swing the applicator aside.
9. Disconnect SUB-D 15 male connector (6) to the female connector (7) of the printer.
10. Loosen screw (4) and move off the locking plate (3) from the hinges.
11. Lift the applicator upward.

## 4.1 Standard Operation

- ▶ Check all external connections.
- ▶ Load the material. Ensure that the locking system is locked ▷ "Operator's Manual" of the printer.
- ▶ Open the shutoff valve.



### Attention!

- ▶ Ensure that the pad is not covered by a label when switching on the printer-applicator system. Otherwise the vacuum sensor may be calibrated incorrectly.

- ▶ Switch on the printer.



### Note!

If the pad is outside the starting position when the printer-applicator system is switched on the procedure will be interrupted with an error message visible on the display.

Pushing the pause button on the printer will negate the error moving the pad to the starting position. The Applicator is ready for work.

- ▶ Press the  respectively **feed** at the printer.  
A synchronization feed is initiated. The processed labels have to be removed manually. After a few seconds the printer carries out a short backfeed to position the front edge of the next label at the printing line.



### Note!

This synchronization also has to be carried out when the print job has been interrupted with the cancel key. Synchronizing is not necessary when the print head was not lifted between print jobs. This also applies if the printer was powered down between print jobs.

- ▶ Start a print job.
- ▶ Start the labelling process via PLC interface.

Error messages during labelling process are shown in the display of the printer ▷ 4 Error Messages.

## 4.2 Cleaning



### Attention!

Never use solvent and abrasive.

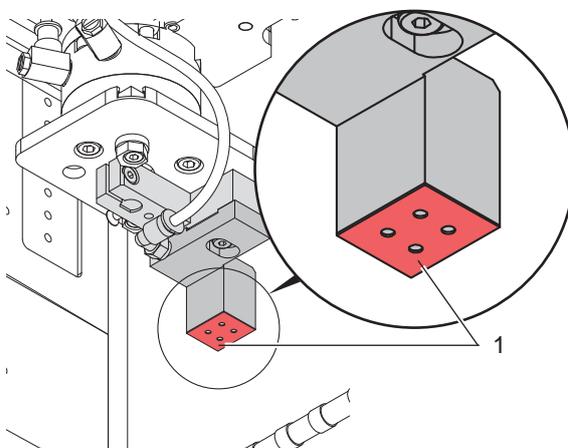


Fig. 5 Cleaning pad with slide foil

- ▶ Clean the outside surfaces with multi purpose cleaner.
- ▶ During regular use dust particles as well as label snippets may accumulate. Remove these with a soft brush and/or a vacuum cleaner.
- ▶ Especially at the slide foil (1) debris may gather. To ensure an ideal takeover and handling of the label it is necessary to clean the surface of slide foil at regular intervals.

4.3 Movement of the Pad

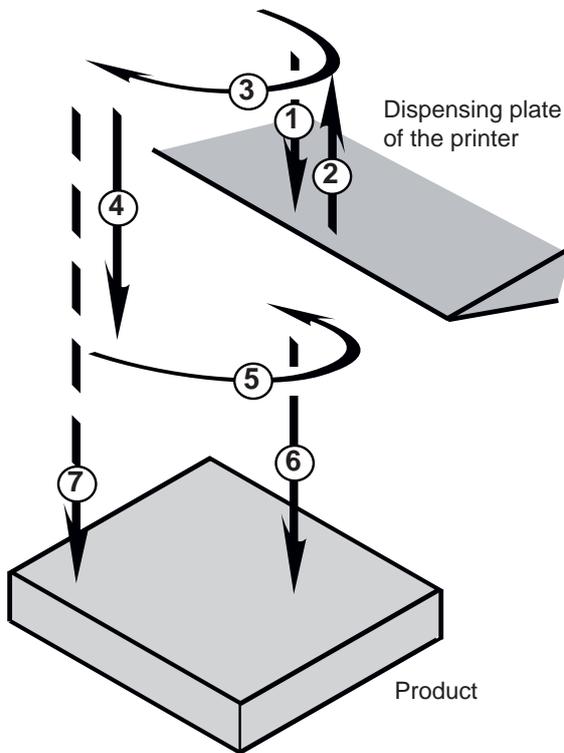
The applicator 4214 has different modes for picking up labels. The position of the pad can also be adjusted to suit different applications of the labels.

The standard position of the pad will be described in ▷ Service Manual. The take up mode is mainly dependant on the size and material of the label. In the standard settings the applicator will ignore the interim steps of "Label hand-over up."

No	Movement of the pad	Label hand-over up, apply 0° swing	Label hand-over up, apply 90° swing	Label apply 0° swing *	Label apply 90° swing *
1	Pad to the dispensing plate of the printer (take up the label)	X	X		
2	Pad departs from the dispensing plate of the printer	X	X		
3	Pad will swing out via a rotation cylinder	X	X	X	X
4	Pad moved to the inclined position below the dispensing plate of the printer and stops	X		X	
5	Pad will swing in via a rotation cylinder	X		X	
6	Pad moves in the swing in position to the product and applies the label	X		X	
7	Pad moves in the swing out position to the product and applies the label.		X		X

\* Take the label via vacuum and support air with a distance between pad and dispensing plate of the printer.

Table 2 Steps of tamp movement



**Hand-over up switch active on/off**

Menu navigation:

HERMES Q

- ⚙️
- > ⚙️ Setup
- > 📄 Labeling
- > Label hand-over
- Passive / Active

Hermes+

- Setup
- > Machine param.
- > Applicator
- > Hand-over up
- Off / On

**Label swings out and applies**

This function will be controlled by the I/O interface of the printer.

The signal **LBLROT (EDR - Hermes+)** on Pin 24 will be used to control this function.

▷ Operator's Manual of the printer

Fig. 6 Movement of the pad

## 5.1 Error Messages of the Printer

For detailed information about printer errors (e.g. 'Paper out', 'Ribbon out', etc.) ▷ Check the operator's manual of the printer.

Error treatment:

- ▶ Clearing the error results.
- ▶ Press the  respectively **feed** to synchronize the label feed, remove the left over labels manually.

To quit the error state press *Repeat* (HERMES Q) respectively the **pause** key (Hermes +).

After error correction, the label causing the error will be reprinted.

## 5.2 Error messages of the applicator

The following table contains an overview of error messages and their possible causes. It also suggests methods to resolve the problem :

Error Message	Possible Cause
<i>Air pressure error</i>	Compressed air is switched off
<i>Air pressure ins. (Hermes+)</i>	Pressure to low < 4 bar
	Pressure to high > 6 bar
<i>Label not depos.</i>	Label has not been placed onto the product; after the pad has moved back the label still sticks on the pad
<i>Upper position not reached</i>	Pad is not in start position if the printer switched on
<i>Upper position (Hermes+)</i>	Pad has not reached the labelling position within 2s after the movement of the pad was started
	Pad has undefined leaving the start position
<i>External error</i>	Process of labeling was braked via the I/O interface of the printer with the XSTP signal
<i>Process Error (Hermes+)</i>	
<i>Upper position not left</i>	There has been no change of the switch state at the upper sensor at the cylinder between the start of the labelling process and the signal from the labelling position sensor
<i>Refl. sensor blk. (Hermes+)</i>	
<i>Vac. plate empty</i>	Label has not been picked up properly by the pad; or label fell off the pad before it could be placed onto the product
<i>Lower position not reached</i>	Pad has not reached the starting position within 2s after the pad has left the labelling position; or pad has left the starting position unauthorized
<i>Lower position (Hermes+)</i>	

Table 3 Error messages of the applicator

Error treatment:

- ▶ Clear the error state.
- ▶ In order to clear the error state press **continue**, **repeat** or **cancel**.
  - Continue* with the next label in the printing queue.
  - Repeat* respectively the **pause** and enter  $\leftarrow$  key repeat the print of the label causing the error. Only applicable with error *Vac. plate empty*.
  - Cancel* the current print job.



### Warning!

**After the error has been resolved the pad will immediately move back to the starting position!**

**Danger of injury to hands and fingers by the moving pad!**

- ▶ **Do not reach into the area of the moving pad and keep long hair, loose clothes, and jewelry away.**

Reprinting a label, interrupted by an error, is not possible without a new printing job.

- ▶ In the mode "apply/print" before the standard cyclic operation can commence the signal "print first label" must be sent or push  respectively the enter  $\leftarrow$  key to send a printed label to the pad.

## 6.1 Declaration of Incorporation



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### Declaration of Incorporation

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

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

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

Device:	<b>Stroke-Turn Applicator</b>
Type:	<b>4214</b>
Applied EU Regulations and Norms:	
<b>Directive 2006/42/EC on machinery:</b>	<ul style="list-style-type: none"> <li>• EN ISO 12100:2010</li> <li>• EN ISO 13849-1:2015</li> <li>• EN 60950-1:2006 +A11:2009+A12:2011+A1:2010+A2:2013</li> </ul>
Person authorised to compile the technical file:	<b>Erwin Fascher Am Unterwege 18/20 99610 Sömmerda</b>
Signed for, and on behalf of the Manufacturer:	<b>Sömmerda, 08.07.2019</b>
<b>cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda</b>	 <b>Erwin Fascher Managing Director</b>

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

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

## 6.2 EU Declaration of Conformity



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### EU Declaration of Conformity

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

Device:	<b>Stroke-Turn Applicator</b>
Type:	<b>4214</b>
Applied EU Regulations and Norms:	Applied Norms:
<b>Directive 2014/30/EU relating to electromagnetic compatibility:</b>	<ul style="list-style-type: none"> <li>• <b>EN 55032:2012</b></li> <li>• <b>EN 55024:2010</b></li> <li>• <b>EN 61000-6-2:2005</b></li> </ul>
<b>Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment:</b>	<ul style="list-style-type: none"> <li>• <b>EN 50581:2012</b></li> </ul>
<b>Commission delegated directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances</b>	
Signed for, and on behalf of the Manufacturer:	<b>Sömmerda, 08.07.2019</b>
<b>cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda</b>	 <b>Erwin Fascher Managing Director</b>