

## Assembly Instructions



Stroke Applicator

# 4014 / 4016

Family	Type
Stroke Applicator	4014...-200
	4014...-300
	4014...-400
	4016...-200
	4016...-300
	4016...-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.

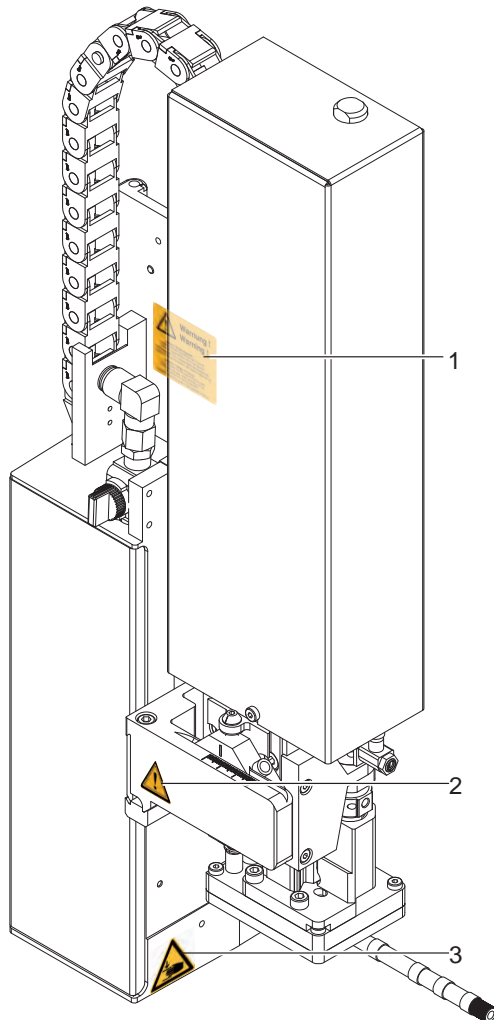


### Warning!

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.
- 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 distant. 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 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.

1.4 Safety Markings



1: Risk of injuries by moving parts!

2: The cylinder is under pressure also if the printer 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 it in 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 and the vacuum as well as the speed of the cylinder is adjustable. Thus the applicator can be adjusted to different label materials and sizes.
- To avoid contamination within the vacuum channels they are cleaned by an air pressure pulse at the end of each application.
- For operation in a system the I/O interface of the printer can be used.

## 2.2 Technical Data

Label transfer method		Tamp pad	Universal pad	Spring loaded tamp pad	Spring loaded universal pad
		4014/16 L/R 11F	4014/16 L/R 1100	4014/16 L/R 31F	4014/16 L/R 3100
Label width in mm for	HERMES Q4 / Hermes+4	20 -114	75 - 90	80 - 114	116 /116
	HERMES Q6 / Hermes+6	50 - 174	-	80 - 174	-
Label height in mm for	HERMES Q4 / Hermes+4	20 - 210	60 - 90	80 - 210	102/152
	HERMES Q6 / Hermes+6	25 - 210	-	80 - 210	-
Compressed air pressure		0.45 MPa (4.5 bar)			
Sound pressure level		under 74 dB(A)			
Product during labeling	fixed	■	■	■	■
	in motion	-	-	-	-
Labeling onto the product	from the top	■	■	■	■
	from below	■	■	■	■
	sideways	■	■	■	■
Product height	variable	■	■	■	■
Product distance to lower edge at cylinder stroke	200 mm up to mm	135	135	130	130
	300 mm up to mm	235	235	230	230
	400 mm up to mm	335	335	330	330
Immersion depth pad F <sup>2)</sup>	up to mm	120	-	100	-
Cycle frequency/min. <sup>1)</sup>		25			

Label transfer method		Blow pad	Roll-on pad	Corner pad
		4014/16 L/R 2100	4014/16 L/R 4100	4014/16 L/R 5100
Label width in mm for	HERMES Q4 / Hermes+4	20 -114	25 - 114	20 - 114
	HERMES Q6 / Hermes+6	on request	50 - 174	-
Label height in mm for	HERMES Q4 / Hermes+4	20 - 100	80 - 250	60 - 210
	HERMES Q6 / Hermes+6	on request	80 - 250	-
Compressed air pressure		0.45 MPa (4.5 bar)		
Sound pressure level		under 74 dB(A)		
Product during labeling	fixed	■	-	■
	in motion	■	■	-
Labeling onto the product	from the top	■	■	■
	from below	■	■	-
	sideways	■	■	-
Product height	variable	-	■	■
Product distance to lower edge at cylinder stroke	200 mm up to mm	140	160	100 <sup>3)</sup>
	300 mm up to mm	240	260	200 <sup>3)</sup>
	400 mm up to mm	340	360	300 <sup>3)</sup>
Cycle frequency/min. <sup>1)</sup>		25	20	20

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 and Hermes+ must be modified.

<sup>3)</sup> depending on label height and division.

2.3 Overview

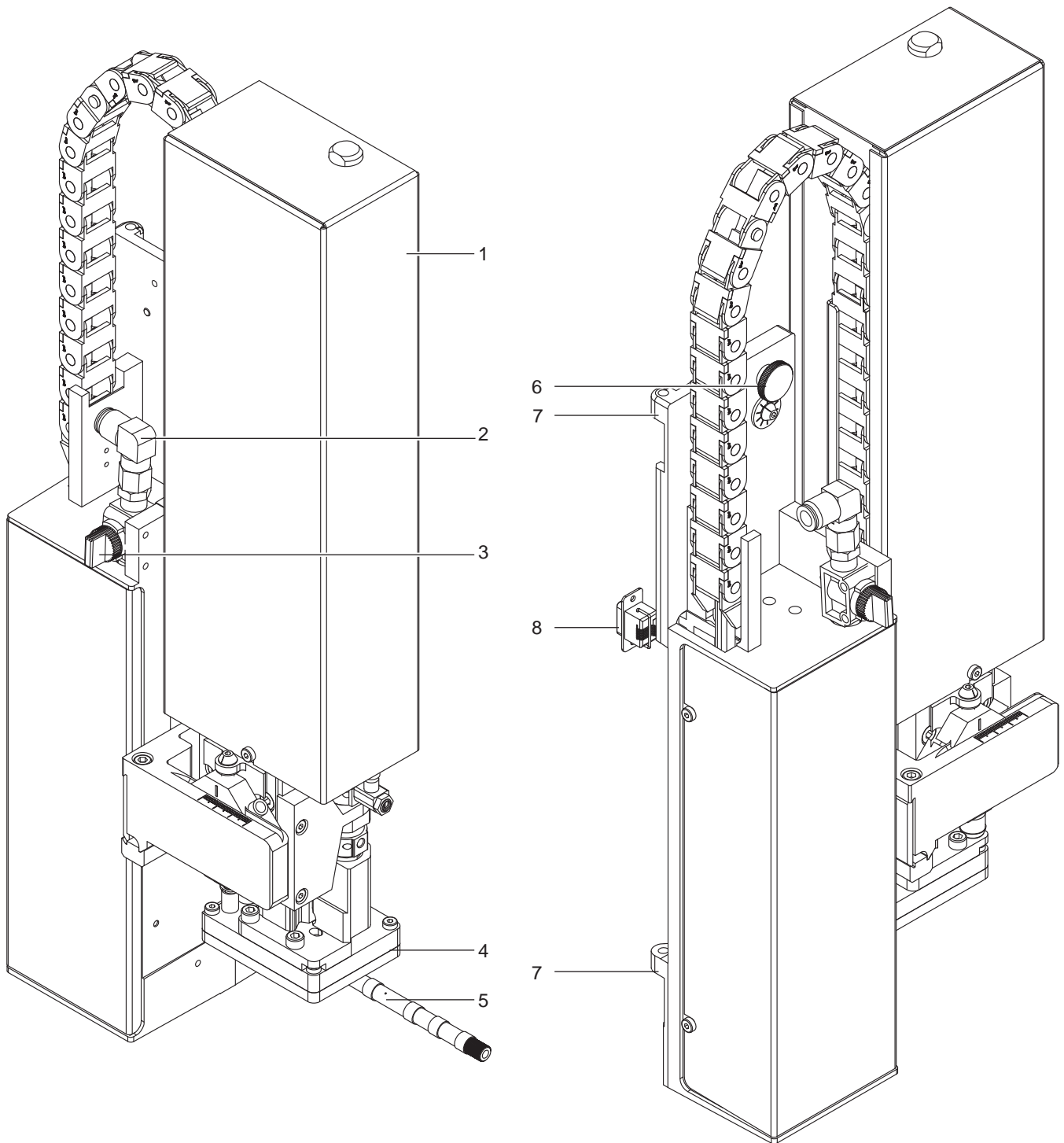
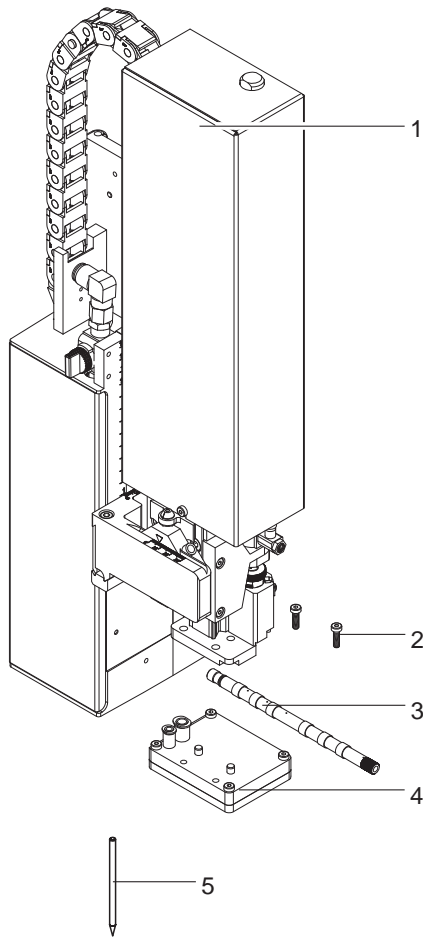


Fig. 2 Device overview - front view

- 1 Cover
- 2 Compressed air connector
- 3 Shutoff valve
- 4 Pad (customized)

- 5 Blow tube for supporting air
- 6 Knurled screw for attaching the applicator to the printer
- 7 Hinges
- 8 SUB-D 15 interface to the printer

## 2.4 Contents of Delivery



1. Applicator
2. Screws as part of the pad
3. Blow tube - as ordered
4. Pad - as ordered
5. Pen to make holes  
(only for universal pads)
6. 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.



2.5 Pads

2.5.1 Universal Pads

**Universal pad 4014L/R-1100**

Standard size : 70x60, 90x90

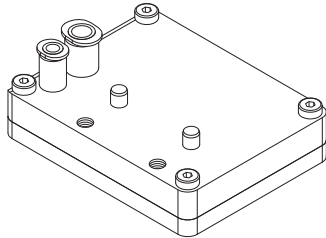


Fig. 4 Universal pad 70x60

**Universal Pad 4014L/R-3100, spring-loaded**

Standard size : 116x102, 116x152

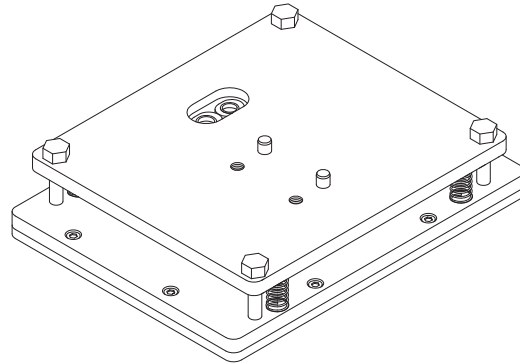


Fig. 5 Universal spring-loaded pad 116x152

Universal pads are available in different standard sizes.

According to the size of the label the holes may be pierced by the customer. For that purpose a piercing pin is included in the delivery contents.

On request, tamp pads customized to the label sized are delivered.

2.5.2 Roll-on pad 4014L/R-4100/4016L/R-4100

2.5.3 Blow pad 4014L/R-21xx

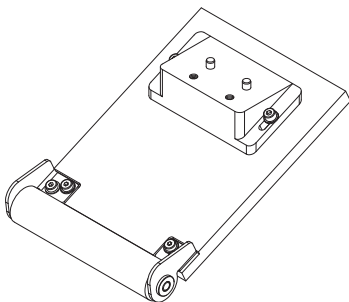


Fig. 6 Roll-on pad

Roll-on pads are only produced on request customized to the label size.

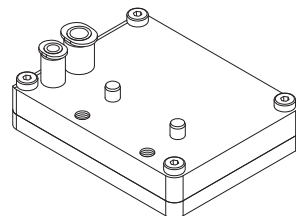


Fig. 7 Blow Pad

Blow pads are only produced on request customized to the label size.

2.5.4 Corner pad 4014L/R-5100

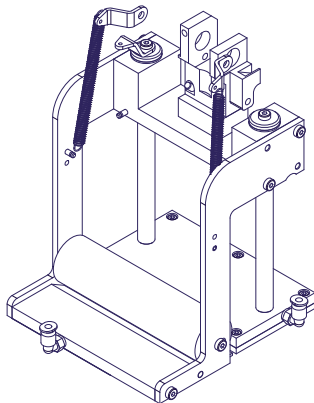


Fig. 8 Corner pad

Corner pads are only produced on request customized to the label size.

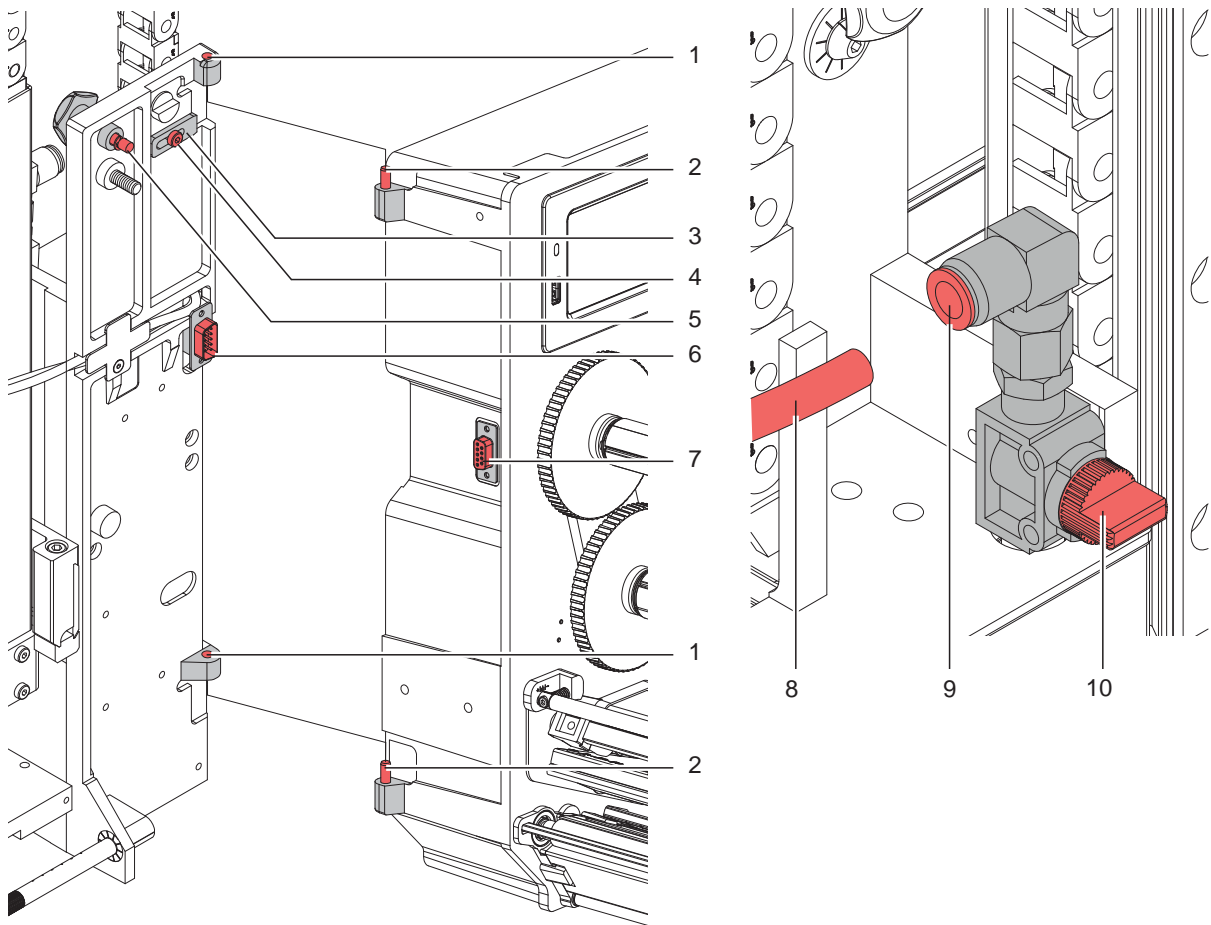


Fig. 9 Mounting applicator on printer



### 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 faultily.

- ▶ Switch on the printer.




#### Note!

In case the pad is outside the start position in the moment of switching on it will interrupted the procedure and give notice an error message on the display of the printer.

If you push the button pause on the printer is receipt the error and the applicator will move into the start position.

The Applicator is ready for work.

- ▶ Press the  respectively **feed** at the printer.  
A synchronization feed is released. 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 synchronizing 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 off between print jobs.

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

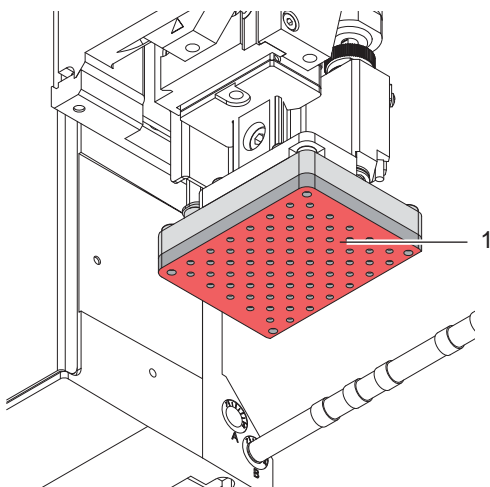
Error messages during labelling process are shown in the display of the printer ▷ Error Messages.

### 4.2 Cleaning



#### Attention!

Never use solvent and abrasive.




- ▶ Clean the outside surfaces with multi purpose cleaner.
- ▶ In regularly function it's possible that accrue dust particles and label splits. Remove that by a soft brush or/and a vacuum cleaner.
- ▶ Especially at slide foil (1) it's possible that fouling deposit. To receive an ideal takeover and handling of the label it's necessary to clean the surface of slide foil at regular intervals.

Fig. 10 Cleaning pad with slide foil

## 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 2 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




### 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 Applicator</b>
Type:	<b>4014/4016</b>
Applied EU Regulations:	Applied Standards:
<b>Directive 2006/42/EC on machinery:</b>	<ul style="list-style-type: none"> <li>• <b>EN ISO 12100:2010</b></li> <li>• <b>EN ISO 13849-1:2015</b></li> <li>• <b>EN 60950-1:2006 +A11:2009+A12:2011+A1:2010+A2:2013</b></li> </ul>
Other Relevant Directives:	
<ul style="list-style-type: none"> <li>• <b>Directive 2014/30/EU relating to electromagnetic compatibility</b></li> <li>• <b>Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment</b></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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Germany

### EU Declaration of Conformity

We declare herewith that the following device as a result of design, construction and the version put in circulation complies 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 Applicator</b>
Type:	<b>4014/4016</b>
Applied EU Regulations:	Applied Standards:
<b>Directive 2014/30/EU relating to electromagnetic compatibility:</b>	<ul style="list-style-type: none"> <li>• EN 55032:2012</li> <li>• EN 55024:2010</li> <li>• EN 61000-6-2:2005</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>• EN 50581:2012</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>