



**Stroke Applicator**

**4114 / 4116**

Made in Germany

Family	Type
Stroke applicator	4114L-200
	4114L-300
	4114L-400
	4114R-200
	4114R-300
	4114R-400
	4116L-200
	4116L-300
	4116L-400
	4116R-200
	4116R-300
	4116R-400

**Edition:** 06/2017 - Part No. 9009197

### Copyright

This documentation as well as translation hereof are property of cab Produkttechnik GmbH & Co. KG.

The replication, conversion, duplication or divulgement of the whole manual or parts of it for other intentions than its original intended purpose demand the previous written authorization by cab.

### Editor

Regarding questions or comments please contact cab Produkttechnik GmbH & Co. KG.

### Topicality

Due to the constant further development of our products discrepancies between documentation and product can occur.  
Please check [www.cab.de](http://www.cab.de) for the latest update.

### Terms and conditions

Deliveries and performances are effected under the General conditions of sale of cab.

#### Germany

cab Produkttechnik  
GmbH & Co KG  
Postfach 1904  
D-76007 Karlsruhe  
Wilhelm-Schickard-Str. 14  
D-76131 Karlsruhe  
  
Telefon +49 721 6626-0  
Telefax +49 721 6626-249  
  
[www.cab.de](http://www.cab.de)  
[info@cab.de](mailto:info@cab.de)

#### France

cab technologies s.a.r.l.  
F-67350 Niedermodern  
Téléphone +33 388 722 501  
[www.cab.de/fr](http://www.cab.de/fr)  
[info.fr@cab.de](mailto:info.fr@cab.de)

#### USA

cab Technology Inc.  
Tyngsboro MA, 01879  
Phone +1 978 649 0293  
[www.cab.de/us](http://www.cab.de/us)  
[info.us@cab.de](mailto:info.us@cab.de)

#### Asia 亚洲

cab Technology Co., Ltd.  
希愛比科技股份有限公司  
Junghe, Taipei, Taiwan  
Phone +886 2 8227 3966  
  
[www.cab.de/tw](http://www.cab.de/tw)  
[info.asia@cab.de](mailto:info.asia@cab.de)

#### China 中国

cab (Shanghai) Trading Co., Ltd.  
鉅博(上海)貿易有限公司  
Phone +86 21 6236-3161  
  
[www.cab.de/cn](http://www.cab.de/cn)  
[info.cn@cab.de](mailto:info.cn@cab.de)

Representatives in other countries on request

<b>1</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Instructions .....	4
1.2	Intended Use .....	4
1.3	Safety Instructions .....	4
1.4	Safety Marking .....	5
1.5	Environment .....	5
<b>2</b>	<b>Product Description .....</b>	<b>6</b>
2.1	Important Features .....	6
2.2	Technical Data .....	6
2.3	Overview without Cover .....	7
2.4	Contents of Delivery .....	9
<b>3</b>	<b>Operation .....</b>	<b>10</b>
3.1	Standard Operation .....	10
3.2	Cleaning .....	10
<b>4</b>	<b>Error Messages .....</b>	<b>12</b>
4.1	Error Messages of the Printer .....	12
4.2	Error Messages of the Applicator .....	12
<b>5</b>	<b>Licences .....</b>	<b>13</b>
5.1	Declaration of Incorporation .....	13
5.2	EU Declaration of Conformity .....	14
<b>6</b>	<b>Installation .....</b>	<b>15</b>
6.1	Factory default Settings .....	15
6.2	Tools .....	16
6.3	Mounting and Dismounting the Cover .....	16
6.4	Mounting the Applicator to the Printer .....	17
6.5	Transportation Lock .....	17
6.6	Mounting the Pad .....	18
6.7	Mounting the Blow Tube .....	18
6.8	Connecting the Compressed Air .....	19
<b>7</b>	<b>Adjustments .....</b>	<b>20</b>
7.1	Pad Adjustments .....	20
7.2	Vacuum Adjustments .....	21
7.3	Adjusting the Blow Tube (Supporting Air) .....	22
7.4	Adjustment of the Stopper for Blow on Mode .....	24
7.5	Lift Speed of Cylinder Z .....	25
7.6	Sensors on Cylinder Z .....	26
7.7	End Position Cushioning .....	27
7.8	Adjusting the Options for Z-Direction Movement .....	27
7.9	Lift Speed of Cylinder Y .....	28
7.10	Adjust the Sensors Y .....	28
7.11	Labeling from below - Changing the Spring at the Impact Sensor .....	29
<b>8</b>	<b>Configuration .....</b>	<b>30</b>
8.1	Method for Changing the Printer Setup .....	30
8.2	Quick Mode for Setting the Delay Times .....	30
8.3	Configuration Parameters of the Applicator .....	31
8.4	Setting the Peel Position .....	32
8.5	Activation of Peel-off Mode .....	32
<b>9</b>	<b>Operation .....</b>	<b>33</b>
9.1	Test Mode without a Print Job .....	33
9.2	Test Mode with Print Job .....	33
<b>10</b>	<b>Spare Parts .....</b>	<b>34</b>
10.1	Retainer Assembly .....	34
10.2	Pneumatics Retainer Assembly .....	35
10.3	Electronics Retainer Assembly .....	36
10.4	Guiding and Cylinder Assembly Y .....	37
10.5	Cylinder Assembly Z .....	38
<b>11</b>	<b>Drawings .....</b>	<b>39</b>
11.1	Block Diagram .....	39
11.2	Pneumatic Drawing Type 4114 .....	40
11.3	Pneumatic Drawing Type 4116 .....	41
11.4	Label Position Type 4114 L .....	42
11.5	Label Position Type 4114 R .....	43
<b>12</b>	<b>Index .....</b>	<b>44</b>

## 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 applicator mounted on a cab printer of the 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 operating 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 away. Before any alterations are undertaken in those areas, close the compressed air shutoff valve.
- The device may only be used in a dry environment, do not expose it to moisture (water splashes, sprays and mist)
- 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 service 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 may therefore not be removed.

## 1.4 Safety Marking

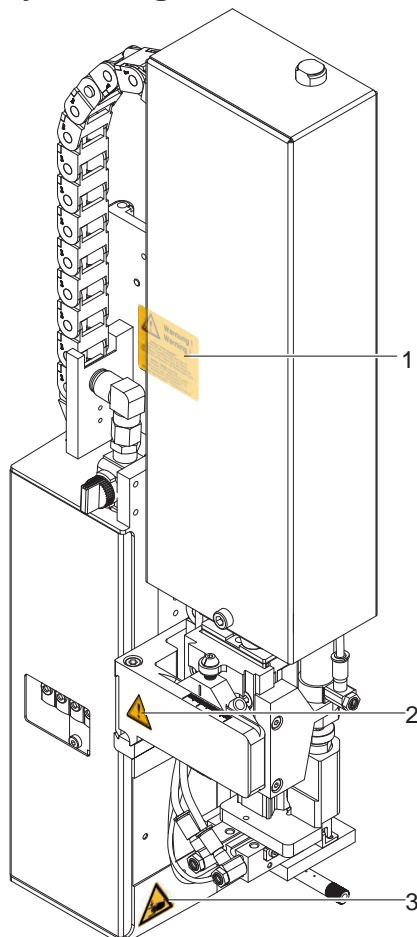


Fig. 1 Safety marking

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 to hands and  
fingers by the moving pad!



### Attention!

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

## 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 applicator 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 are adjustable. That way the applicator can be adapted to different label materials and sizes.
- To avoid contamination within the vacuum channels they are cleaned by air pressure impulse 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	Tamp pad with foam	Tamp pad with label stop	Blow pad
		4114/16 L/R 11 F	4114/16 L/R 12 F	4114/16 L/R 61 F	4014 L/R 2100
Label width in mm	for Hermes+2	4 - 58	10 - 58	10 - 58	10 - 58
	for Hermes+4	10 - 114	10 - 114	10 - 114	10 - 114
	for Hermes+6	50 - 174	50 - 174	50 - 174	-
Label height in mm	for Hermes+2	4 - 80	8 - 80	4 - 80	10 - 80
	for Hermes+4	8 - 80	8 - 80	8 - 80	10 - 80
	for Hermes+6	8 - 80	8 - 80	8 - 80	-
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	fixed	-	-	-	■
	variable	■	■	■	-
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		100	100	100	-
Cycle time about frequency/min. <sup>1)</sup>		30	30	30	30

Label transfer method		Silicon pad	
		4114/16 L/R 8800 F	
Label width in mm	for Hermes+2	10 - 58	
	for Hermes+4	10 - 114	
	for Hermes+6	50 - 174	
Label height in mm		8 - 80	
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	
	300 mm up to mm	235	
	400 mm up to mm	335	
Immersion depth pad F <sup>2)</sup> up to mm		100	
Cycle time about frequency/min. <sup>1)</sup>		30	

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+ must be modified.

## 2.3 Overview without Cover

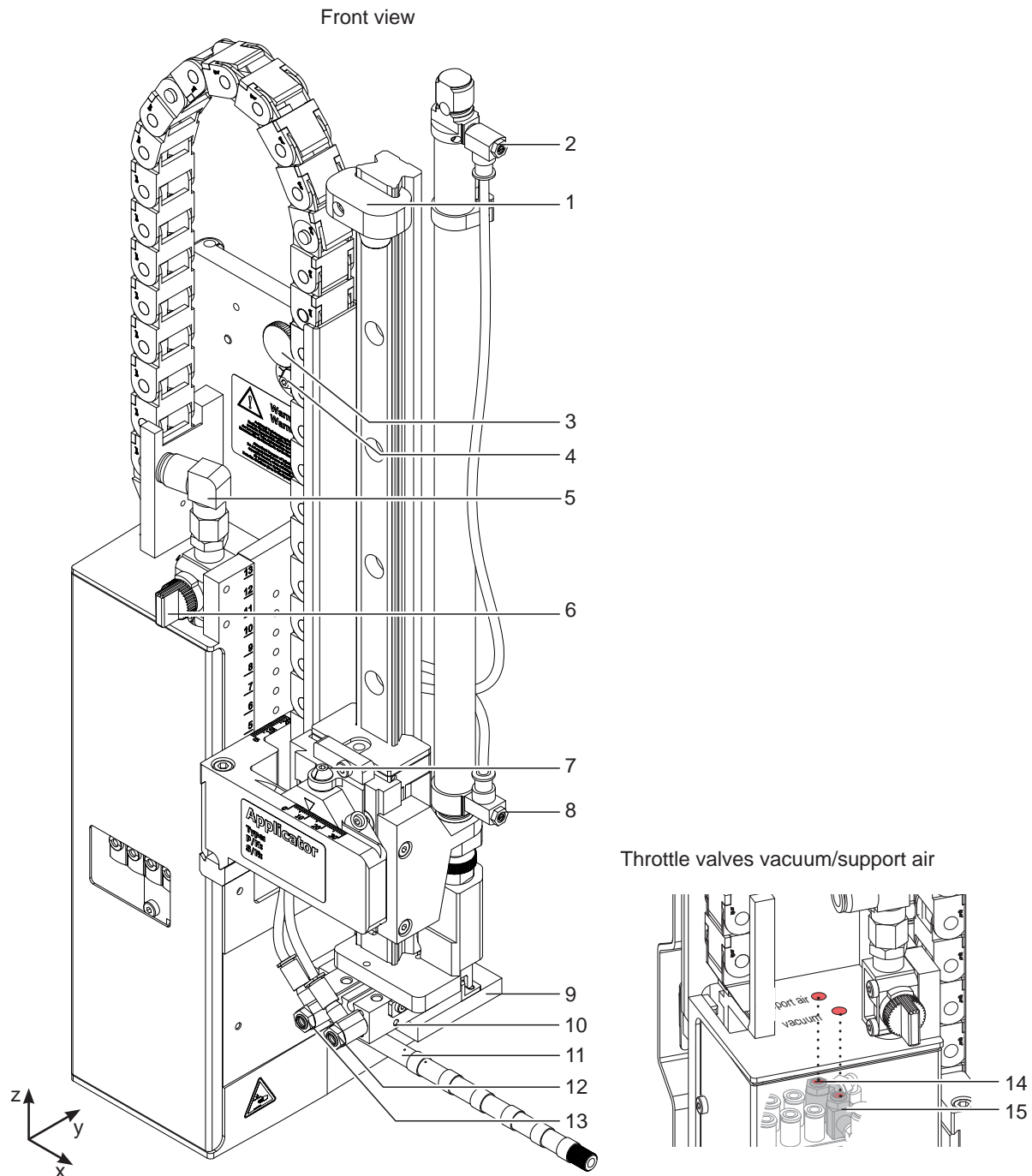


Fig. 2 Overview - front view

- |  |   |
|--|---|
| 1 Stopper for the operation mode "Blow on", transport lock         | 8 Throttle valve cylinder - move out Z-direction  |
| 2 Throttle valve cylinder - move in Z-direction                    | 9 Pad - customized                                |
| 3 Knurled screw for attaching the applicator to the printer        | 10 Cylinder Y                                     |
| 4 Setting screw to adjust the angle between applicator and printer | 11 Blow tube for supporting air                   |
| 5 Compressed air connector   | 12 Throttle valve cylinder - move out Y-direction |
| 6 Shutoff valve  | 13 Throttle valve cylinder - move in Y-direction  |
| 7 Setting screw for vertical adjustment cylinder assembly          | 14 Support air throttle valve                     |
|  | 15 Vacuum throttle valve                          |



Rear View

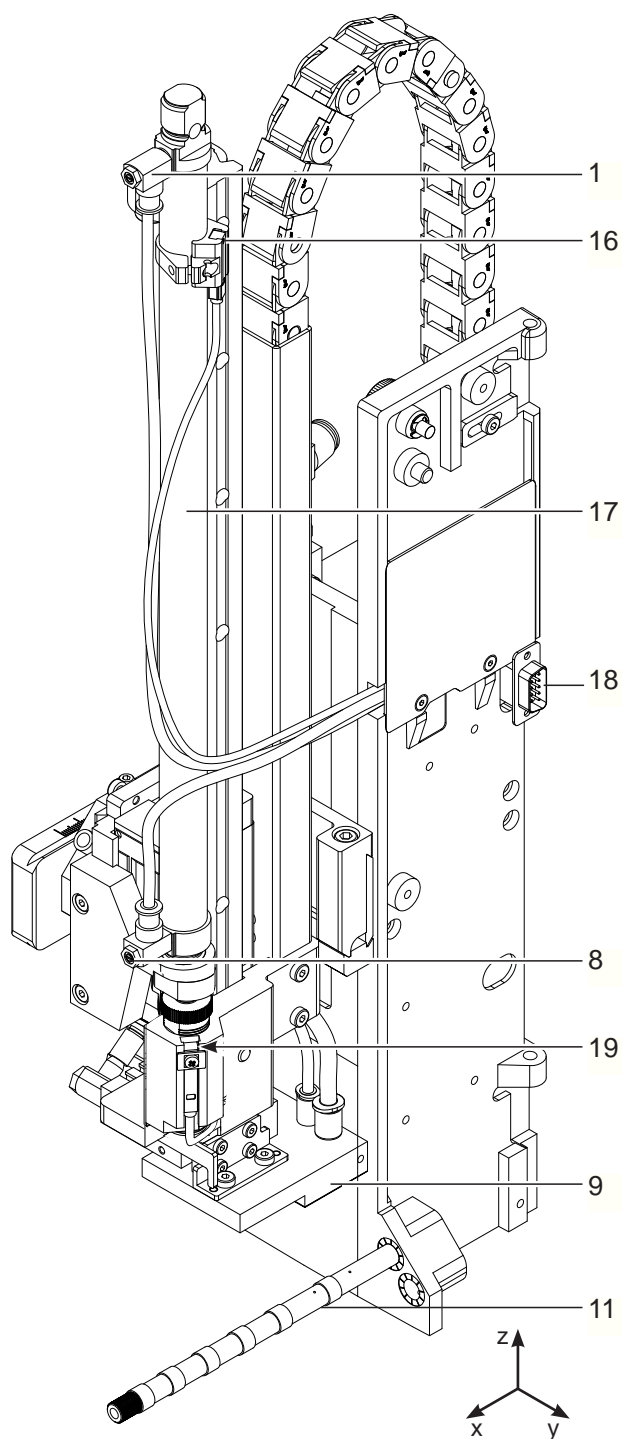


Fig. 3 Device overview - Rear view

- 1 Throttle valve cylinder - move in Z-direction
- 8 Throttle valve cylinder - move out Z-direction
- 9 Pad - customized
- 11 Blow tube for supporting air
- 16 Sensor "start position" Cyl. Z
- 17 Cylinder Z-direction
- 18 Interface to the printer
- 19 Sensor "end position" Cyl. Z

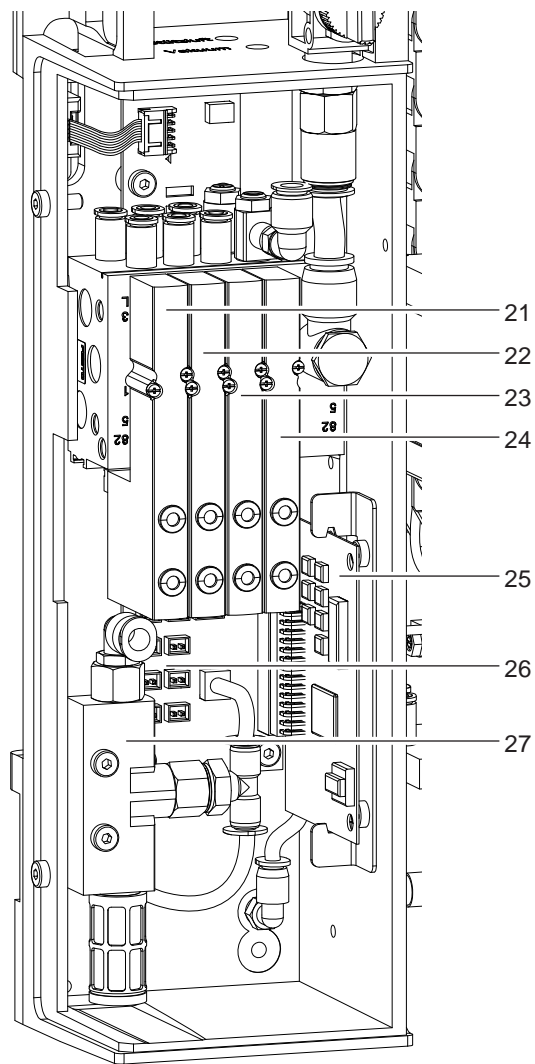
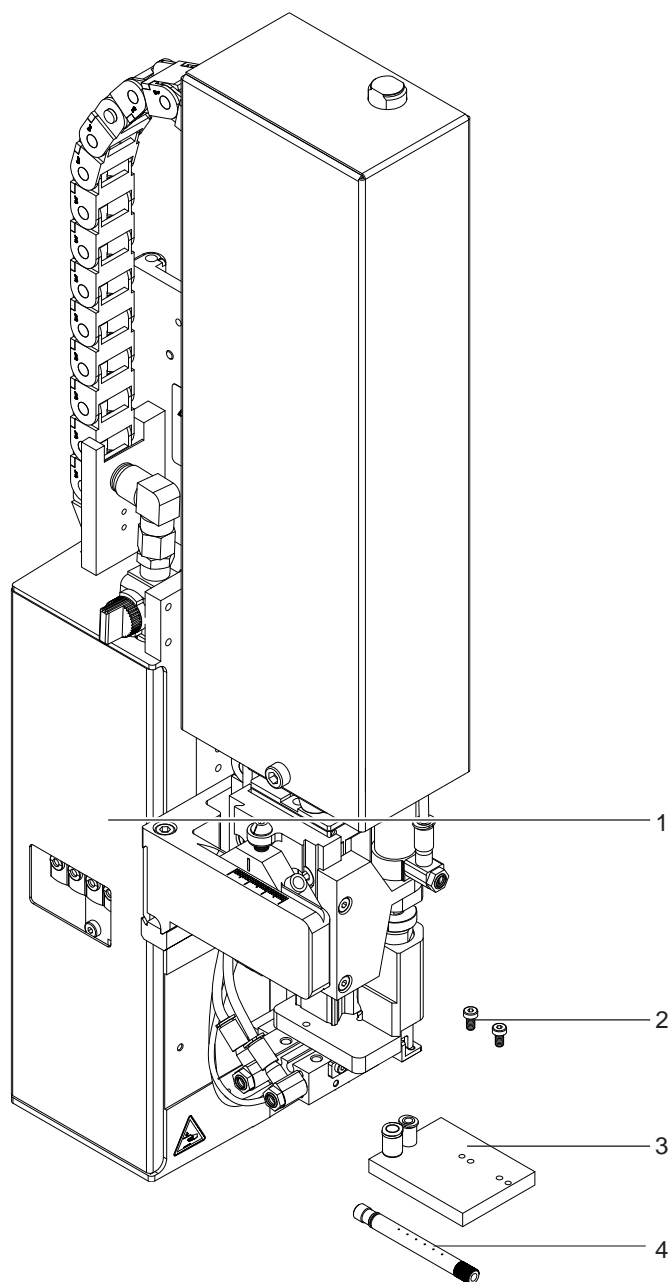


Fig. 4 Device overview - control system

- 21 Valve Cylinder Z
- 22 Valve Cylinder Y
- 23 Valve Blow air
- 24 Valve Vacuum and Support air
- 25 PCB Applicator Control
- 26 PCB Applicator Interfaces
- 27 Vacuum Generator



### 2.4 Contents of Delivery



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

Fig. 5 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 moisture and splashes.

### 3.1 Standard Operation

- ▶ Check all external connections.
- ▶ Load the material.
- ▶ 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!

If the pad is not in the start position when the printer is switched on an error message appears on the display.

Press pause button at the printer.

The applicator moves into the start position and is ready for work.

- ▶ Press the **feed** button on 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 synchronizing also has to be carried out when the print job has been interrupted with the cancel button.

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.

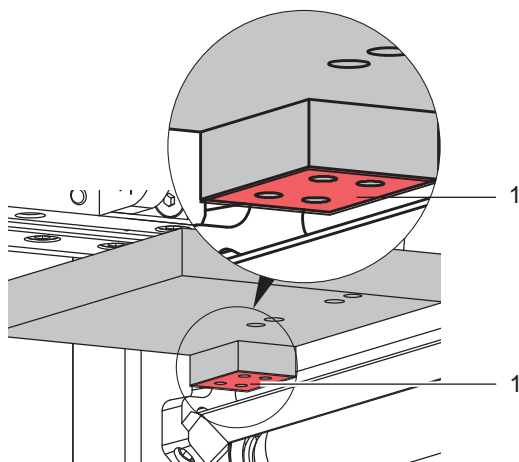
Error messages during labelling process are shown in the display of the printer. ▷ „4 Error Messages“

### 3.2 Cleaning



#### Attention!

Never use solvent and/or abrasive.



- ▶ Clean the outside surfaces with multi purpose cleaner.
- ▶ Remove dust particles and leftover label pieces with a soft brush and/or vacuum cleaner.
- ▶ The slide foil (1) requires regular cleaning as most of the dirt will accumulate here.

Fig. 6 Cleaning the pad

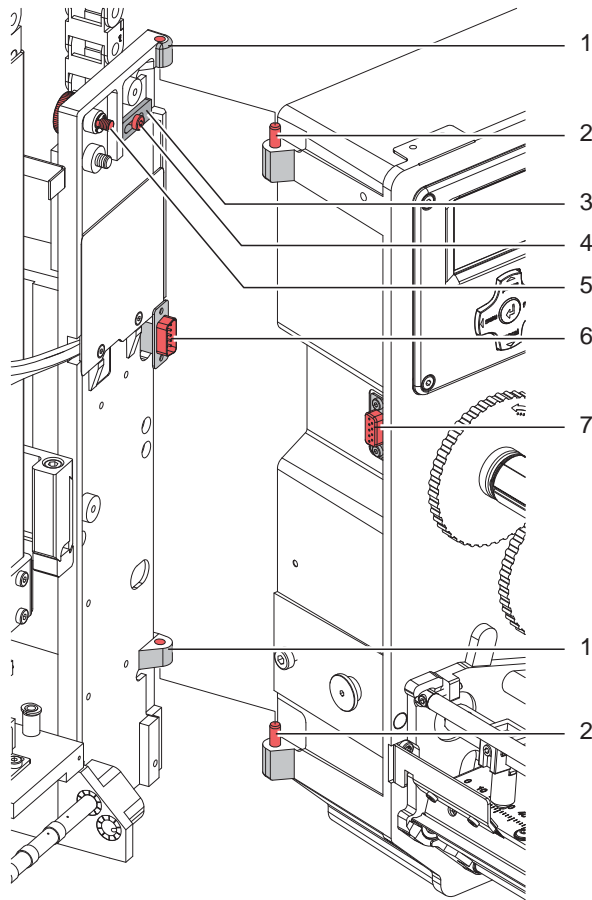


Fig. 7 Mounting applicator to printer



#### Attention!

- ▶ **Disconnect the printer from the power supply before mounting the applicator!**
- ▶ **Ensure the printer is in a stable secure position!**
- ▶ **Connect the compressed air only after mounting the applicator to the printer!**

For cleaning the applicator and printer it is sometime necessary to turn away or/and dismount the applicator. Do not change the adjustments of setting screws, throttle valves or other.

#### Pivot Away/Dismount the Applicator

1. Loosen thumbscrew (5) and pivot the applicator aside.
2. Disconnect SUB-D 15 male connector (6) from the female connector (7) of the printer.
3. Loosen screw (4) and remove the locking plate (3) from the hinges.
4. Lift the applicator from the hinges.

#### Mount the Applicator

1. With the female parts (1) of hinges hang the applicator on the hinges parts (2) of the printer.
2. Connect the SUB-D 15 male connector (6) to the female connector (7) of the printer.
3. To secure the applicator against slipping out of hinges, loosen screw (4), move metal part (3) under the hinge and tighten screw (4).
4. Swing the applicator to the printer and tighten the thumbscrew (5).

## 4.1 Error Messages of the Printer

For detailed information about printer errors (e.g. 'Paper out', 'Ribbon out', etc.) ▷ Operator's manual of the printer  
Error treatment:

- ▶ Clear the error results.
- ▶ Press the **feed** button to synchronize the label feed, remove the peeled labels manually.
- ▶ Press the **pause** button to quit the error state.

After error correction, the print of the label causing the error will be repeated.

## 4.2 Error Messages of the Applicator

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

Error Message	Possible Cause
Air pressure ins.	Compressed air is switched off
	Pressure too low < 4 bar
	Pressure too high > 6 bar
Label not depos.	Label has not been placed onto the product; after the pad has moved back the label is still sticking to the pad.
Lower position	Pad has not reached the starting position within 2s after the pad has left the labelling position; or pad has left the starting position without authorization.
Process Error	Process of labeling was interrupted via the I/O interface of the printer with the STP signal.
Refl. sensor blk.	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.
Upper position	Pad is not in the starting position when the printer is switched on.
	Pad has not reached the labelling position within 2s after the movement of the pad was started.
	Pad has left the printing position without authorization.
Vac. plate empty	Label has not been picked up properly by the pad; or label fell off the pad before it could be placed onto the product.

Table 2 Error messages of the applicator

Error treatment:

- ▶ Clear the error results.
- ▶ Press the **pause** key to quit the error state.



### Note!

In the case of errors check the **Service Manual** for adjustments and settings.



### 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.**

After error correction, the printing of the label causing the error cannot be repeated without restarting the print job except the error "Vac. plate empty". In this case, the last label will be printed again after resolution via the **pause** key and then pressing the Enter button ↵.

- ▶ In the application mode "Apply/Print" sends the signal "Print first label" or press the button ↵ to send a printed label to the tamp.

## 5.1 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>4114/4116</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 13849-1:2008</b></li> <li>• <b>EN 60950-1:2006</b> <b>+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</b> <b>Am Unterwege 18/20</b> <b>99610 Sömmerda</b>
Signed for, and on behalf of the Manufacturer:	<b>Sömmerda, 19.06.2017</b>
<b>cab Produkttechnik Sömmerda</b> <b>Gesellschaft für Computer-</b> <b>und Automationsbausteine mbH</b> <b>99610 Sömmerda</b>	 <b>Erwin Fascher</b> <b>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.

## 5.2 EU Declaration of Conformity



### 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>4114/4116</b>
Applied EU Regulations:	Applied Standards:
<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>
Signed for, and on behalf of the Manufacturer:	<b>Sömmerda, 19.06.2017</b>
<b>cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda</b>	 <b>Erwin Fascher Managing Director</b>

## 6.1 Factory default Settings

**Note!**

The applicator is set up in a standard configuration by the factory. These values guarantee a smooth operation.

**Note!**

In the case of a customer specific setup with special material the settings can deviate from the standard values.

In this case the standard values in the setup protocol are as follows.

The factory default settings are:

- Connected to a cab Hermes+ printer, vertical
- Used Pad:  
cab part No.: 5963881 54x36 for L  
cab part No.: 5963878 54x36 for R
- Material used for factory default settings: cab part No.: 5556472 54x35.5
- Pressure value of the compressed air: 0.45 MPa (4.5 bar)



## 6.2 Tools







Screwdriver with parallel blade	2.5		To adjust the throttle valves and product sensor
Hexagon key L-wrench	0.8		To adjust the sensors (in contents of delivery)
	2.5		For matched norm parts (in contents of delivery)
	4		Pad adjustments Changing pad
Flat-round nose	straight		To mount/dismount tubes
	angled		
Open spanner	SW 8		To change the throttle valves
	SW 13		Setting the spring power on the adapter bolt
	SW20		Changing the cylinder
Manometer	± 7 bar		Air pressure control

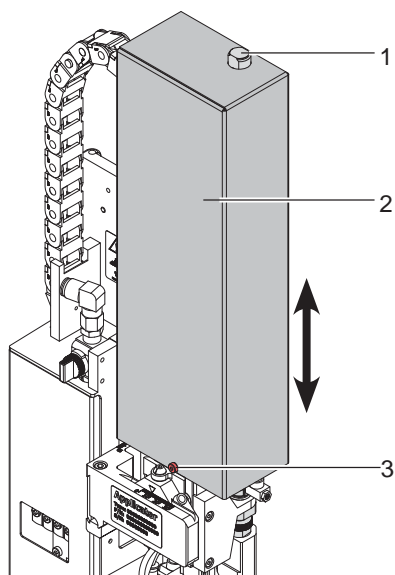
Table 3 Tools

## 6.3 Mounting and Dismounting the Cover

To initiate the applicator or for adjustments it is necessary to dismount the cover (2). After these works are finished remount the cover.

**Warning!**

- ▶ Do not operate the applicator without cover (2).
- ▶ Only dismount the cover when servicing the applicator.

**Dismount**

1. Loosen screw (3).
2. Lift off cover (2).

**Mount**

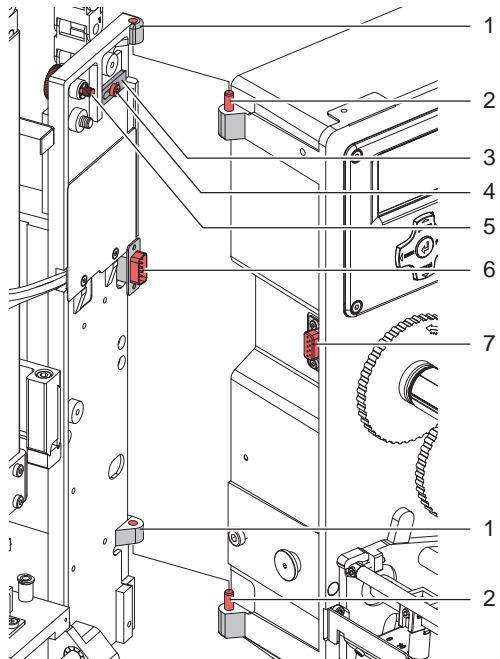
3. Move the cover (2) over the cylinder assembly.
4. Put in the cylinder (1) through the hole in the cover (2).
5. Tighten screw (3) to fasten the cover (2).

Fig. 8 Cover

## 6.4 Mounting the Applicator to the Printer

**Attention!**

- ▶ Disconnect the printer from the power supply before mounting the applicator!
- ▶ Ensure the printer is standing in a stable position!
- ▶ Connect the compressed air only after mounting the applicator to the printer!



1. Hang the applicator to the printer via the female hinges (1) to the male hinges (2) of the printer.
2. Connect the SUB-D 15 male connector (6) to the female connector (7) of the printer.
3. To ensure the applicator does not slip out of the hinges, loosen screw (4), move the locking plate (3) to secure the applicator and tighten screw (4) again.
4. When pivoting the applicator onto the printer ensure that the cable is not caught between the two units.
5. Tighten the thumbscrew (5).
6. Raise the stopper on the rail to enable movement of the lifting cylinder. ▷ „6.5 Transportation Lock“

Fig. 9 Mounting applicator to the printer

## 6.5 Transportation Lock

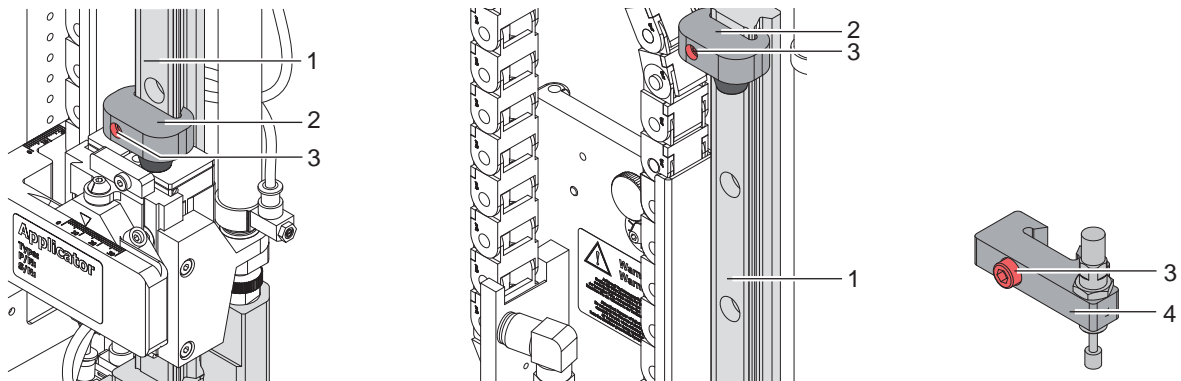


Fig. 10 Stopper as transport lock

When the applicator is delivered, the stopper (2) is mounted on the rod (1). With this stopper (2) the labelling position for the operation mode "Blow on" can be adjusted. In delivery status the stopper (2) is used as transport lock.

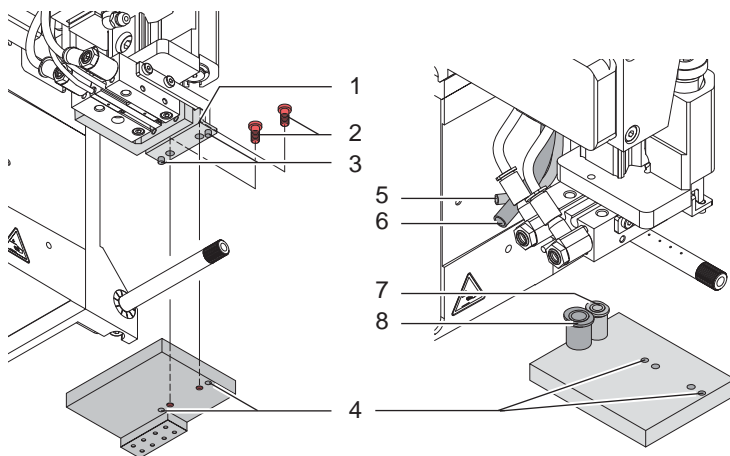
**Note!**

To reduce the impact energy it is possible to use a stopper with cushion (4).

**Releasing the transport lock**

1. Loosen screw (3) of the stopper (2).
2. Move the stopper (2) along the rod (1) into the position as in operation mode:
  - Operation mode "Blow on": ▷ 7.4 Adjusting the stopper
  - Operation mode "Stamp on": Move the stopper (2) up to the end of the rod (1).
3. Tighten screw (3) to fix the stopper (2) in position.

## 6.6 Mounting the Pad



1. Slide the pins (3) into the holes of pad (4) by lifting the pad to pad holder (1).
2. Fix the pad with the screws (2) to the pad holder (1).
3. Insert the vacuum tube (5) and the blowing air tube (6) into the appropriate push-in-fittings (7,8) of the pad.

Fig. 11 Mounting the pad



### Attention!

- To avoid possible collisions of the pad with other parts of the printer-applicator system, please roughly align the pad in all directions (► „7 Adjustments“) before connecting the applicator to the compressed air supply!

## 6.7 Mounting the Blow Tube

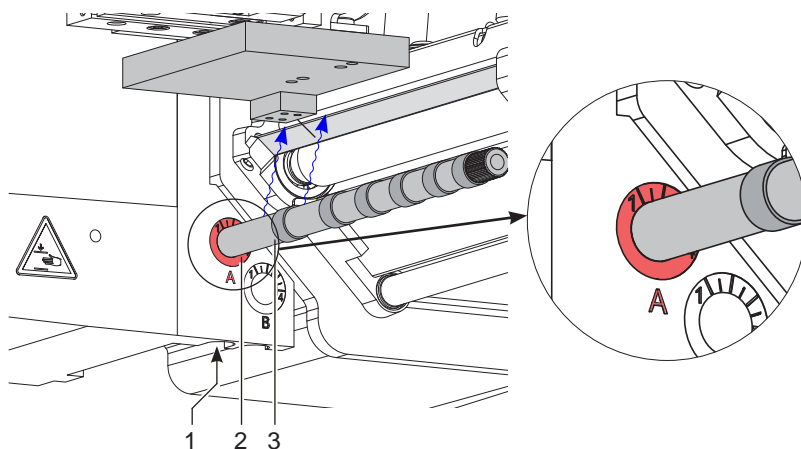


Fig. 12 Mounting the blow tube

It is possible to rotate the blow tube to optimize the direction of the support air for the take over procedure of the label from printer to applicator.

1. Loosen screw (1).
2. Put in the blow tube (3) into the hole A (2).
3. Tighten screw (1) gently to secure it. ► „7.4 Adjustment of the Stopper for Blow on Mode“

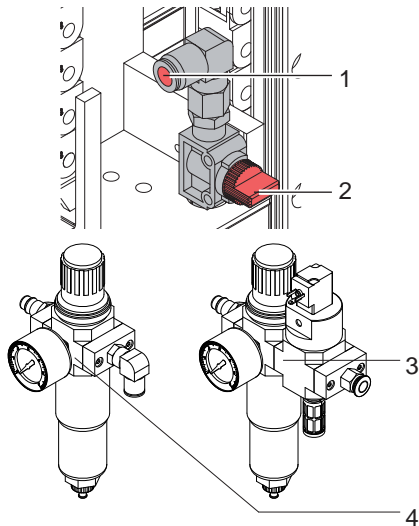
## 6.8 Connecting the Compressed Air

**Attention!**

Adjustments and function control were done with a compressed air value of 4.5 bar.  
The applicator operating range is between 4.0 and 6.0 bar.

**Warning!**

When connecting the applicator to compressed air it is considered "IN USE!" Cylinder motion is possible!  
► Do not reach into the zone of the moving pad and keep long hair, loose clothes, and jewelry away.



- 1 Check that the stop valve (2) is closed as illustrated
- 2 Attach compressed air to connector (1).
- 3 Open the stop valve (2) by turning it into the direction of air flow.
- 4 Switch on the printer by the power switch.

It is possible to use an air pressure regulation unit.

cab offers two versions of air pressure regulators.

- Air pressure regulation unit with included magnetic valve (3)  
Controlling via printer  
▷ Interface description of the printer
- Standard version (4)

Fig. 13 Compressed air connection

**Note!**

If the pad is not in the start position when the printer is switched on an error message appears on the display.

Press the pause button on the printer.

The applicator will move into the start position and will be ready for use.

**Note!**

Only mount the air pressure regulation unit as illustrated otherwise the functionality of the air-water separator cannot be guaranteed.

## 7.1 Pad Adjustments

For optimal functionality it is necessary to place the pad exactly over the label for the takeover procedure.

### Moving the pad in X-, Y- and Z-direction

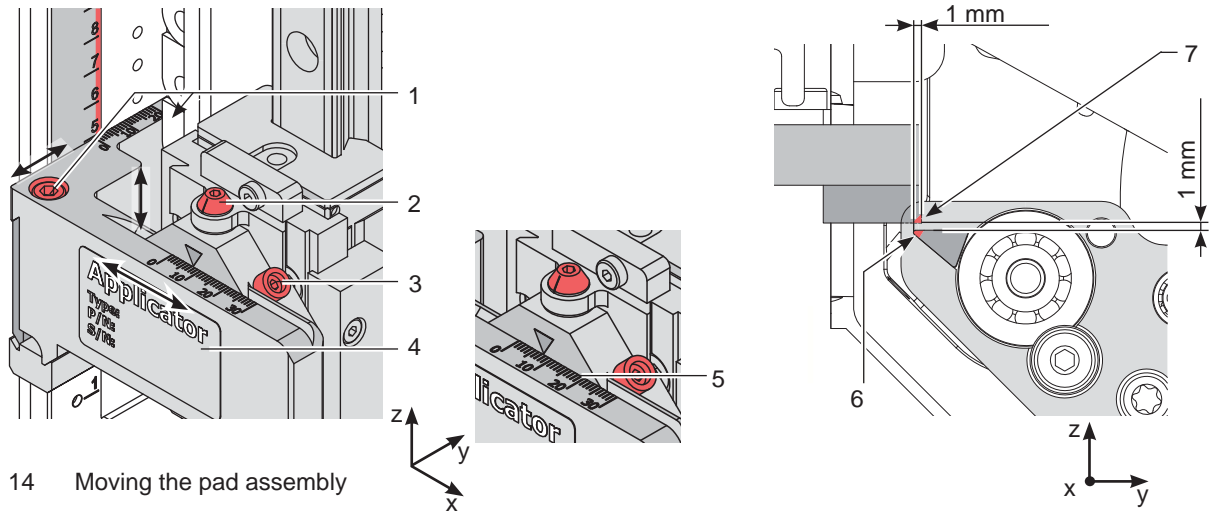


Fig. 14 Moving the pad assembly

#### Adjustment in the X-direction - Sideways Adjustment

1. Loosen screw (3).
2. Move the cylinder assembly group (4) including pad along the cross beam until the pad is over the middle of the label intended for application. For better orientation there is a graduation mark (5) depicted on the assembly group.
3. Tighten screw (3).

#### Adjustment in the Y-direction - Print Direction

1. Loosen screws (1).
2. Move cylinder assembly (4) including pad along the guide rail so that the distance between the edge of the pad (6) and the edge of the dispense plate (7) of the printer is approximately 1 mm.
3. Tighten screws (1).

#### Adjustment in Z-direction - Height Adjustment

1. Loosen screw (3).
2. Turn setting screw (2) so that the bottom of the pad is 1 mm over the top edge of the dispense plate (7).
3. Tighten screw (3).

#### Adjusting the Parallelism between Pad and Dispense Edge

The edge of the pad must be parallel to the dispense edge of the printer.

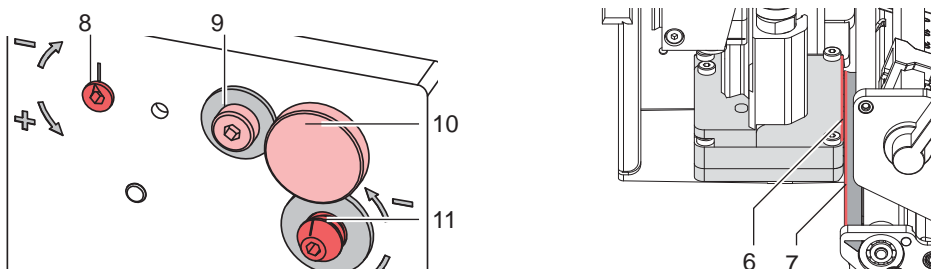


Fig. 15 Adjusting the pad to the dispense edge

1. Loosen knurled screw (10) and screw (9).
2. Press the applicator against the printer and adjust the angle between applicator pad edge (6) and printer dispensing plate (7) via the setting screw (11) and the eccentric (8).
3. Tighten screw (9) and fasten the applicator with knurled screw (10).

## 7.2 Vacuum Adjustments

The label will be held on the pad by a vacuum.

The vacuum needs to be set up in such a way that the label covers all the suction holes and is not hindered before it reaches its intended position on the pad.

**The default Value of the Vacuum is -0.6 bar.**

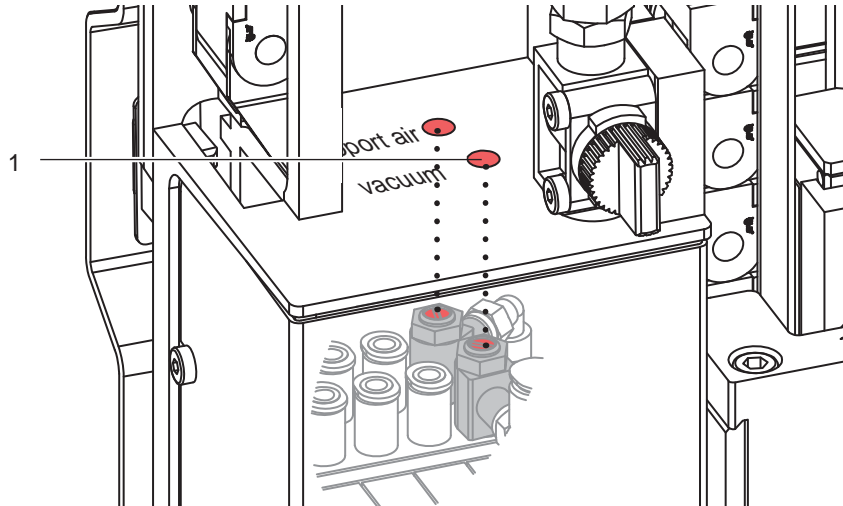
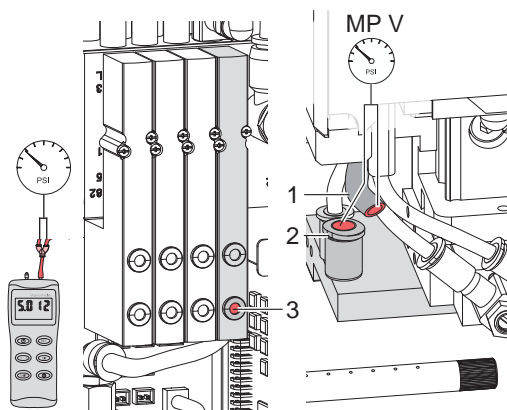


Fig. 16 Throttle valve "vacuum"

- ▶ Adjust the vacuum on the throttle valve "vacuum" (1) so that the label will be sucked up over the entire area.
- ▶ To increase the vacuum turn the setting screw on the throttle valve (1) counterclockwise.

### Measuring Point Vacuum (MP V)



Use a manometer with a measurement area -7 to 7 bar for measurement the pressure.

#### MP V: Vacuum -standard value -0.6 bar

1. Remove cover.
2. Cover the suction plate so it is airtight.
3. Attach manometer between tube (1) at the energy track and fitting (2) on the pad.
4. Activate the valve manually by pressing the micro switch (3) to measure the pressure.
5. Mount cover.

Fig. 17 Measuring Points for the vacuum



### Attention!

**After pressure measurements, reconnect all components correctly.**

### 7.3 Adjusting the Blow Tube (Supporting Air)

The blow tube must be adjusted in such a way that the label takeover is unhindered by turbulence and the supporting air blows the label evenly against the pad.

The default factory value is 2 bar.



**Note!**

Use an appropriate blow tube for the printer in use.

A number of holes of the blowing tube are covered by plastic rings. It is necessary remove as many of these rings as are needed to ensure the entire label-width is supported.

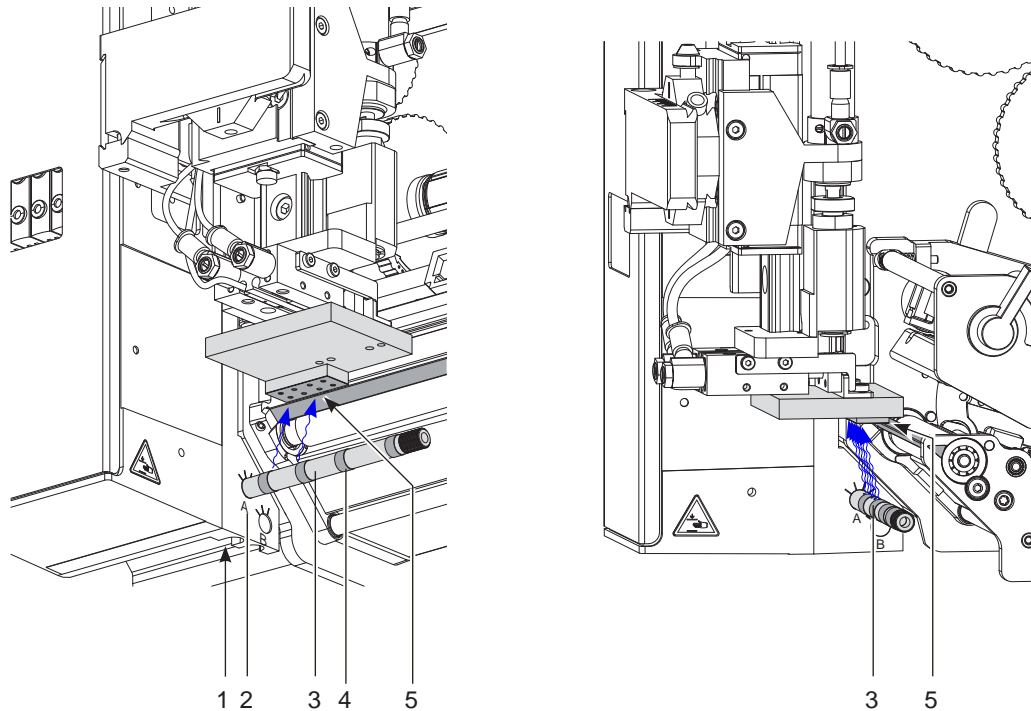


Fig. 18 Adjust the blow tube

The blow tube (3) for the supporting air can be rotated around its axis. That way the direction of the supporting air can be optimized.

1. Loosen screw (1).
2. Put in the blow tube (2) into the tube adapter A (2).  
Turn the blow tube (2) in the direction that the air current can support the take up of the label.
  - For small labels direct the air current more toward the dispensing edge (5) of the printer.
  - For larger labels direct the air current away from the dispense edge (6).
 Use the graduation guide for orientation.
3. Open all holes of the blow tube to cover the label width. Remove rings (4) if necessary.  
All holes outside the label width should be covered with the shrink tube rings provided. Once the unneeded holes have been covered the shrink tube should be shrunk.
4. Tighten screw (1).



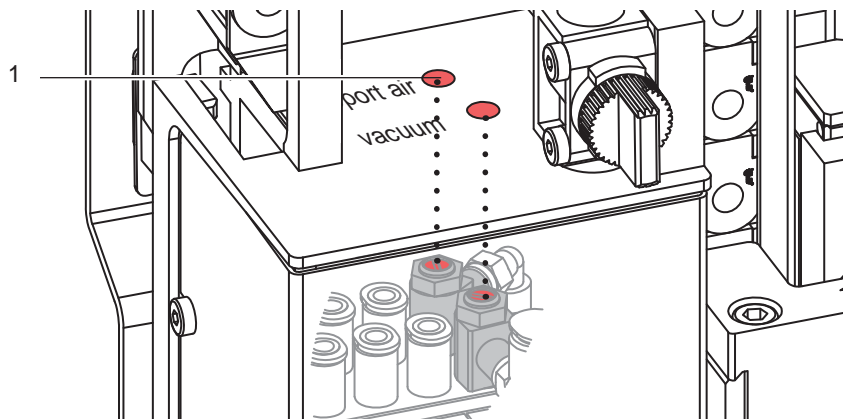
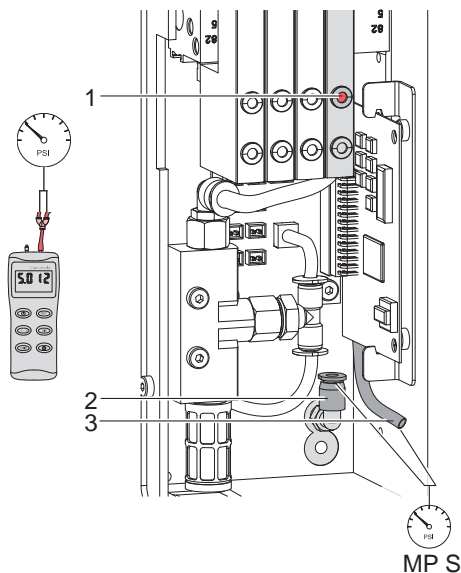


Fig. 19 Throttle valve "support air"

The air pressure can be adjusted with the "support air" valve (1) to fine tune the procedure.

► To increase the supporting air turn counterclockwise the screw at the valve (1)

### Measuring Point Support Air (MP S)



Use a manometer with a measurement range of -7 to 7 bar to control the pressure.

#### MP V: Vacuum - Reference Value (-0.6 bar)

1. Remove cover.
2. Cover the suction plate so it is airtight.
3. Attach manometer between tube (1) of the energy chain and fitting (2) of the pad.
4. Activate the magnetic valve manually by pressing the micro switch (3) to measure the pressure.
5. Mount cover.

Fig. 20 Measuring support air



### Attention!

After pressure measurements, reconnect all components correctly.

## 7.4 Adjustment of the Stopper for Blow on Mode



### Note!

For operation mode "Blow on" only!

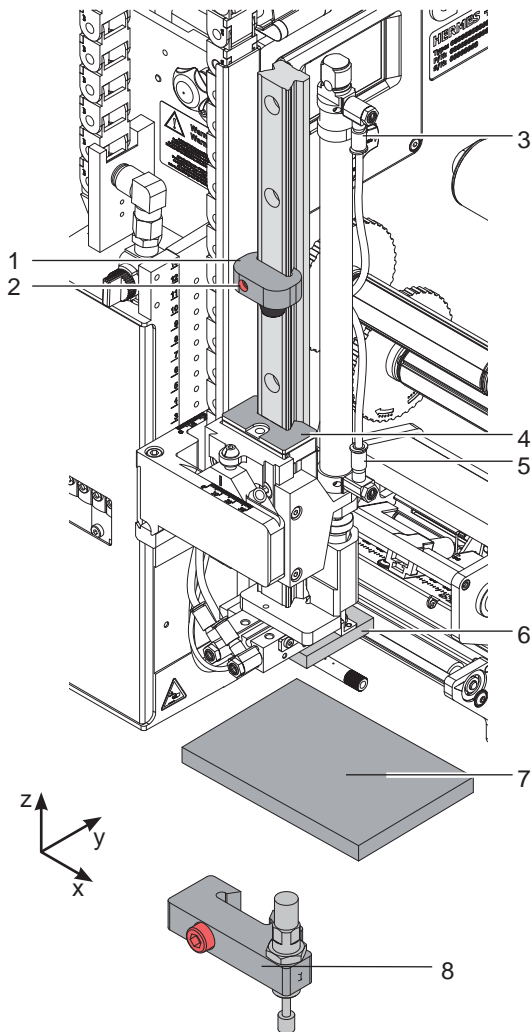
The operation mode "Blow on" allows labelling without contact.

The pad does not press on the product. The label will be blown from the pad to the product over a distance up to 10 mm.



### Attention!

► Switch off the printer and close the shutoff valve for the compressed air at the service unit!



1. Place a product sample (7) at the labelling point.
2. Pull the tubes out of the push-in-fittings (3,5).
3. Loosen the screw (2) in the stopper (1).
4. Move the pad manually in the required labelling position. The distance between the blow pad (6) in the labelling position and the product surface (7) must not exceed 10 mm.
5. Move the stopper (1) against the guide block (4) and tighten the screw (2)
6. Insert the tubes into the appropriate push-in-fittings (3,5).
7. Open the shutoff valve and switch on the printer.



### Note!

To reduce the impact energy of the pad it is possible to use a stopper with cushioning as option.

Fig. 21 Adjusting the Stopper

## 7.5 Lift Speed of Cylinder Z

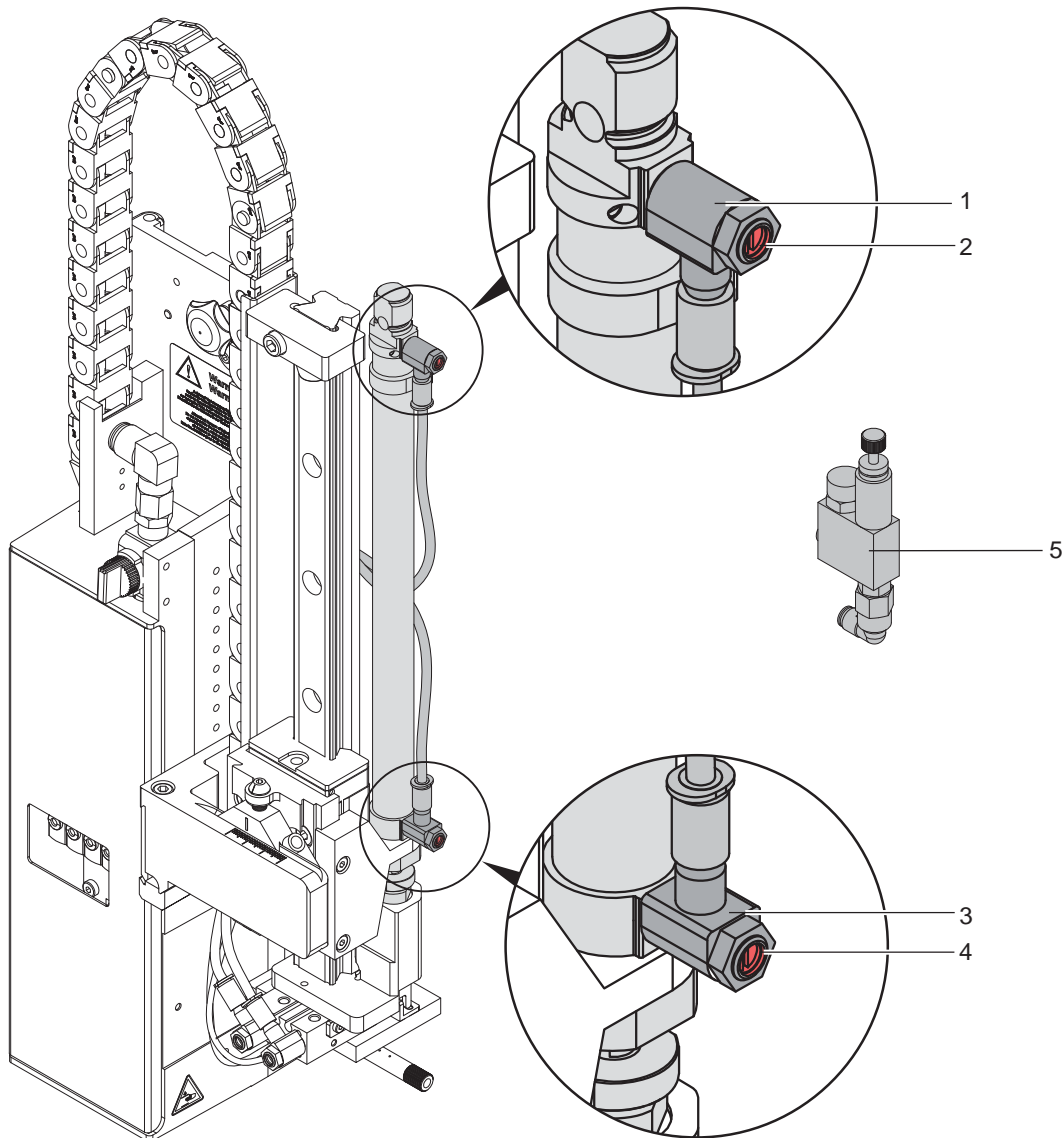


Fig. 22 Throttle valves on the cylinder Z

The speed of the pad movement can be regulated by two throttle valves (1, 3).

- Adjust the pad movement speed as necessary.
- To increase the downward speed turn counterclockwise the screw (4) at the lower valve (3).
- To increase the upward speed turn counterclockwise the screw (2) at the upper valve (1).

**Note!**

The application pressure of the pad is mainly depending on the downward speed of the pad.

- In order to reduce the application pressure turn clockwise the screw (4).

**Attention!**

The time for the downward movement of the pad may not exceed 2 seconds  
Otherwise the error message "Lower position" will appear.

**Note!**

To reduce the air pressure in Z-direction it is possible to use an optional pressure reduction valve (5).

- ▷ „7.9 Lift Speed of Cylinder Y“

## 7.6 Sensors on Cylinder Z

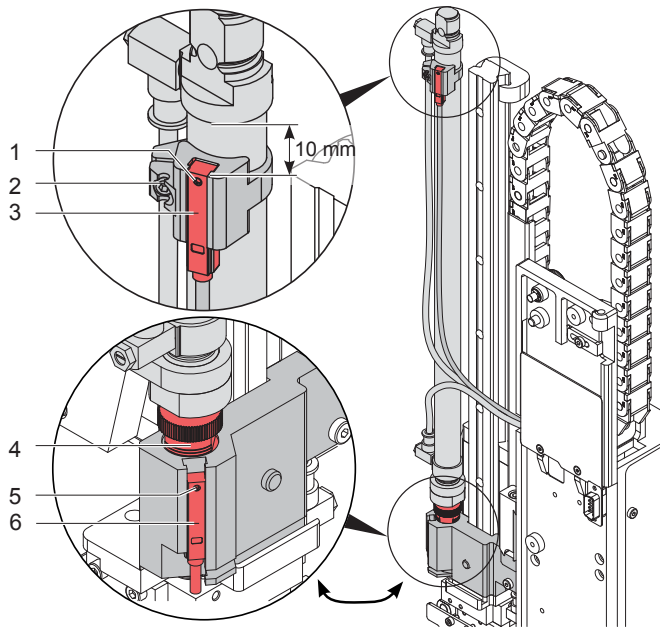


Fig. 23 Sensors on cylinder Z

### Sensor Start Position 1

1. Loosen screw (1) of sensor "Start Position" (3) and move the sensor so that the top edge of the sensor sits comfortably in the sensor holder.
2. Remove the compressed air tubes of the cylinder Z and power up the printer with connection to the applicator.
3. Move the pad toward the stopper manually.
4. Loosen screw (2) of the sensor holder.
5. Position the sensor so that it triggers securely with lit up LED at complete contraction of cylinder Z. This is achieved with the top edge of the sensor being about 10 mm from the top edge of the connection ring. (Fig. 23)
6. Tighten screw (2).

### Labelling Sensor 2

The position of the labelling sensor (6) is dependant on the pad assembly's weight and the mounting position. The spring tension on the adapter bolt is dependant on these parameters and must be adjusted so that the sensor does not trigger unintentionally. The triggering magnet is integrated in the adapter bolt and changes position with the tension spring.

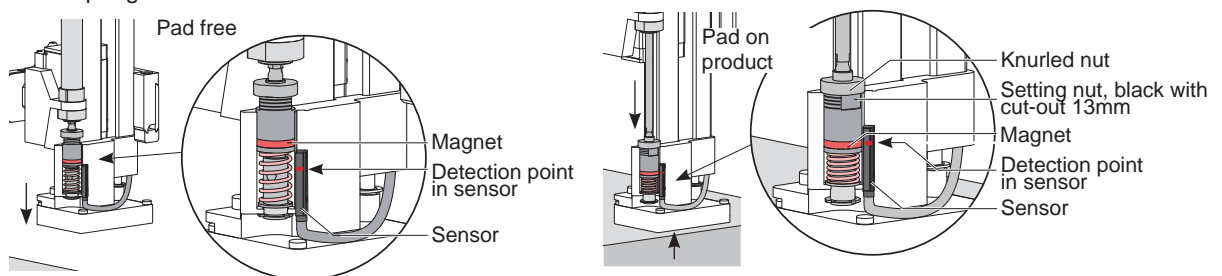


Fig. 24 Labelling sensor principle

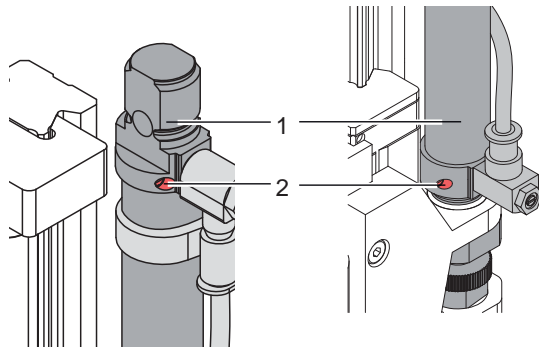
1. Getting the printer and applicator into the final orientation.
2. Adjust the spring tension on the adapter bolt (4) via the black setting nut so that:
  - The adapter bolt is not pushed into the stamp assembly group during motion.
  - The sensor triggers when the pad has reached the labeling position.
3. Turn the setting nut with an open spanner 13 mm and fix the knurled nut by holding it.
  - Turning the setting nut clockwise will increase the spring tension.
  - Turning the setting nut counterclockwise will decrease the spring tension.
4. Loosen screw (5) and move the sensor (6) so that the LED lights up when the adapter bold is pushed into the pad assembly.
5. Tighten screw (5).

## 7.7 End Position Cushioning



### Note!

The end position cushioning of the cylinder is set up to client specifications and does usually not need to be adjusted.



The end position cushioning of the main cylinder reduces the impact energy when the applicator is operating at high speeds and/or mass.

Adjust the end position cushioning so that the piston arrives the end position definitively but does not strike it too hard.

A higher level of end position cushioning will reduce the lift speed.

- ▶ To increase the value of the end position cushioning turn the setting screw (2) clockwise on cylinder (1).
- ▶ To reduce the value of the end position cushioning turn the setting screw (2) counterclockwise on cylinder (1).

Fig. 25 End position cushioning

## 7.8 Adjusting the Options for Z-Direction Movement

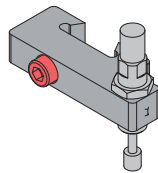


Fig. 26 Stopper with cushioning (guide rail)

The stopper with cushioning (guide rail) reduces the speed of the cylinder Z shortly before impact when the applicator is operated at higher cylinder speeds and with larger pads.

Adjustments like chapter ▶ „7.4 Adjustment of the Stopper for Blow on Mode“

Adjust the stopper with maximum compressed spring.

▶ „6.5 Transportation Lock“

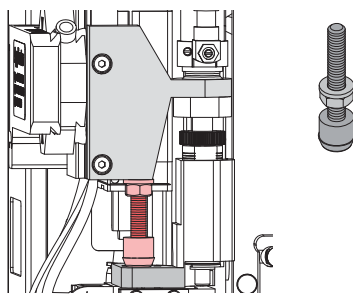


Fig. 27 Stopper (pad assembly)

The stopper avoids the triggering of the labelling sensor by the weight of the pad assembly at the inward motion in case of an installation of 90° or 180°.

The adjustment must be done in the start position of the applicator.

1. Loosen the counter nut of the stopper.
2. Turn the stopper until it easily touches the pad retainer. Do not change the take over position of the pad by the stopper.
3. Tighten the counter nut to fix the stopper.

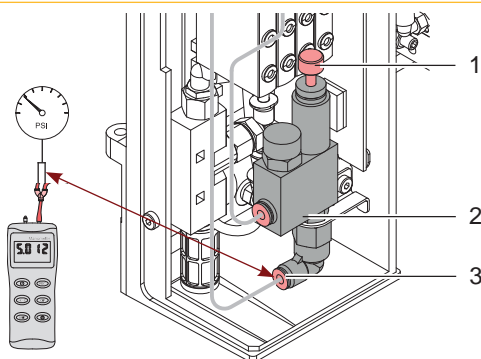


Fig. 28 Pressure reduction valve cylinder Z

The pressure reduction valve (2) can be used when labelling pressure-sensitive products or considering general safety aspects to reduce the pressure of the cylinder in Z-direction. The standard value is 2.5 bar.

- ▶ Connect the manometer between tube and exit (3) and adjust the pressure to 2.5 bar with the knurled screw (1).

It is possible to order an upgraded set with a pressure reduction valve.

Instructions are provided with the upgraded set.

### 7.9 Lift Speed of Cylinder Y

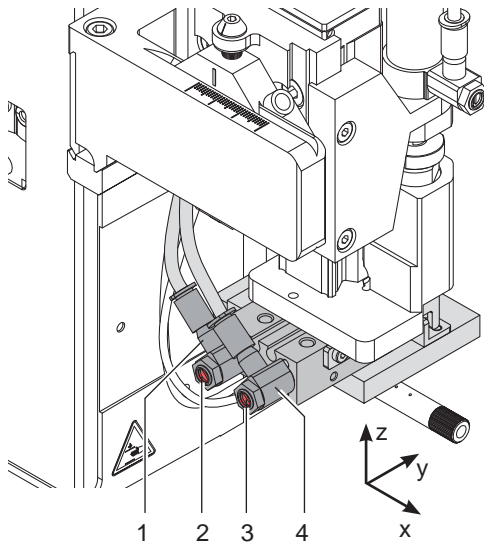


Fig. 29 One-way flow control valve on cylinder Y



**Note!**

Only for type 4114 relevant.

- ▶ Adjust lift speed as necessary.
- ▶ To increase the move-out speed in Y-direction turn counterclockwise the screw (2) on valve (1) .
- ▶ To increase the move-in speed in Y-direction turn counterclockwise the screw (3) on valve (4) .

### 7.10 Adjust the Sensors Y

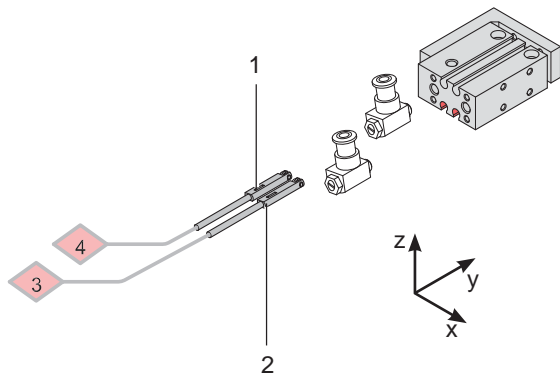
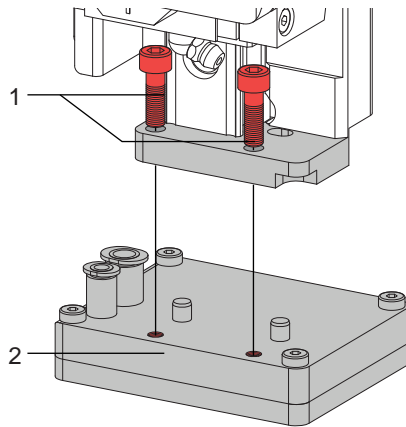


Fig. 30 Sensors on cylinder Y

- Place sensor start position (2) on cylinder Y so that the sensor will switch on if the cylinder is completely moved out and will switch off if the cylinder leaved this position.
- Place sensor end position (1) on cylinder Y so that the sensor will switch on if the cylinder is completely moved in and will switch off if the cylinder leaved this position.

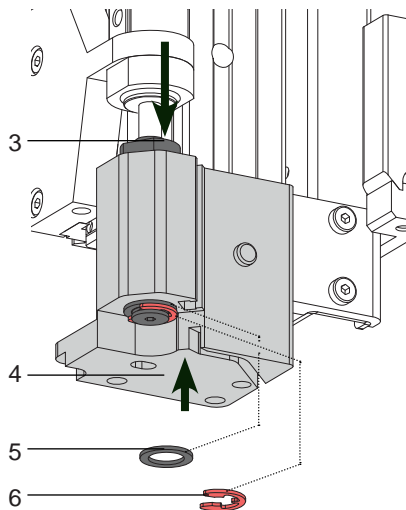
### 7.11 Labeling from below - Changing the Spring at the Impact Sensor

For fault free labeling in a sideways- or upward-motion it is necessary to change the spring of the impact sensor. The stronger spring prevents the unwanted triggering of the impact sensor due to the inertia of the cylinder and stamp assembly group.



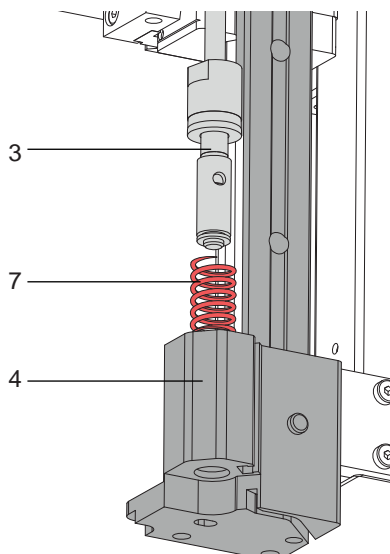
- Loosen screw (1) and dismount the stamp (2) to reach the locking washer (6).

Fig. 31 Demounting the stamp



- Push the adapter bolt (3) into the stamp uptake (4) to ensure that the bottom of the bottom of the bolt is pushed out.
- demount locking plate (6).
- Remove washer (5).

Fig. 32 Loosening the adapter bolt



- Hold onto the adapter bolt (3) and pull off the stamp uptake (4).
- Pull out the pressure spring (6) and replace it with the new one.
- Push together the stamp uptake (4) and the adapter bolt (3).
- Replace the washer (5).
- Place the locking washer (6) back into it's position.

Fig. 33 Changing the spring



The applicator can be operated in different ways. While the original process stays the same, the operation mode can be chosen from within the printer setup.

The most important setting is the selection between the operation modes "Stamp on" and "Blow on".

Additionally the applicator has different application modes concerning the order of printing and applying within one labelling cycle

	Stamp on	Blow on
Print/Apply	x	x
Apply/Print Waiting position up	x	x
Apply/Print Waiting position down	-	x

Table 4 Operation and application modes

Additionally all operating modes can be adjusted by setting different time delays.



**Note!**

For more information about the printer configuration and the function of the buttons in the navigator pad  
 ▷ **Configuration manual of the printer** or ▷ **Operator's manual of the printer**

## 8.1 Method for Changing the Printer Setup

1. Press **menu** button.
2. Select **Setup > Machine param. > Applicator**.
3. Select and adjust the needed parameters.
4. Return to the "Ready" mode.

## 8.2 Quick Mode for Setting the Delay Times

Beside the standard method for the printer configuration there is a quick mode to adjust the delay times available.



**Note!**

**The quick mode settings can be made during operation. The changes directly affect the current print job.**

1. Press the **menu** button for at least 2 seconds.  
The first delay time appears on the display.
2. Adjust the delay time by pressing the ▲ button and ▼ button.
3. To switch between the different delay times press the ► button.
4. To leave the quick setup mode press the ◀ button.  
The selected delay times are stored in the printer.

## 8.3 Configuration Parameters of the Applicator

The configuration parameters of the applicator can be found in the menu `Setup > Machine param.`















Parameter	Meaning	Default
 Applicator	Configuration parameters of the applicator	
 > Mode of oper.	Setting the operation mode Stamp on, Roll on, Blow on	Stamp on
 > Mode of appl.	Setting the application mode Print-Apply/Apply-Print Print-Apply: An external start signal begins the printing of a label followed by the application of that label. After the cycle is complete, the pad waits in the start position without a label. Apply-Print: A separate signal starts the printing of the first label and the transfer of that label to the pad. The start signal applies that label and the next label is printed. The cycle ends with a printed label on the pad.	Print-Apply
 > Waiting position	<b>only for Mode of oper. Blow on and Mode of appl. Apply-Print</b> up: Pad waits in the start position for the start signal down: Pad waits in the labelling position for the start signal	up
 > Blow time	<b>only for Mode of oper. Blow on</b> The length of time (max. 2.5 s) air is blown for the label transfer	0 ms
 > Support delay on	Sets the delay (max. 2.5 s) for the supporting air after printing start and switching on the supporting air. The delay prevents turbulence at the front of the label and, consequently, prevents issues when the label is being picked up from the printer.	0 ms
 > Support del. off	Setting the switch-off delay (max. 2.5 s) for the supporting air between the end of label forwarding and switching on the supporting air. The delay can be useful to separate the rear end of the label from the backing to avoid flaws and to improve the accuracy of label positioning	270 ms
 > Delay time	Delay (max. 2.5 s) between start signal and the start of a labelling cycle. Allows the use of product sensors within conveyors systems for example	0 ms
 > Lock time	All start signals coming in after the first start signal are ignored when they arrive within the lock time.	0 ms
 > Peel position	Shift the position of the dispensed label relative to the dispensing edge. In the software an extra peel offset value is available. The offset values from "Peel position" and from software are added together for execution. ▷ "Setting the Peel Position".	0.0 mm
 > Vacuum control	Setting the label transfer check from printer to pad and from pad to product by the vacuum sensor	On
 > Hand-over up	Take over the label directly from the dispensing edge with contact between pad and dispensing edge. Not applicable for Type 4014/4016	Off
 > Cleaning blow	Activate/Deactivate - air pressure pulses to clean the pad	On
 > Vacuum delay	On - The vacuum will switched on after the end of the label transport. Off - The vacuum will switched on with the start of the label transport.	Off

Table 5 Applicator parameters

## 8.4 Setting the Peel Position

To optimize the transfer of the labels from the printer to the pad there two different parameters are available for adjusting the peel position.



### Attention!

- ▶ First adjust the parameter "Peel Position" in the printer configuration.
- ▶ Following adjust the additional peel-off offset in the software.

**It is very important to follow that procedure for a certain start after label loading and for the re-start after error treatment.**

#### Parameter "Peel Position" in the printer configuration

- ▶ Check the basic setting in the printer setup. Perform labelling cycles by alternately pressing the **feed** button and the Enter button ↵ ▷ „9.1 Test Mode without a Print Job“
- ▶ Adjust the "Peel Position" in such a way, that the blank labels are peeled-off completely from the liner  
▷ „7.3 Adjusting the Blow Tube (Supporting Air)“

#### Peel-off offset in the software

- ▶ Check the setting in the software. Perform labelling cycles by repeatedly pressing the Enter button ↵.  
▷ „9.2 Test Mode with Print Job“
- ▶ Adjust the peel-off offset in such a way, that the printed labels are peeled-off completely from the liner  
▷ Programming manual or software documentation.

## 8.5 Activation of Peel-off Mode



### Note!

- ▶ For labelling operation activate the peel-off mode in the software.
- ▶ For direct programming use the P command ▷ Programming manual.

## 9.1 Test Mode without a Print Job

**Warning!**

The pad will be moved to the starting position immediately!

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

► Do not reach into the zone of the moving pad and keep long hair, loose clothes, and jewelry away.

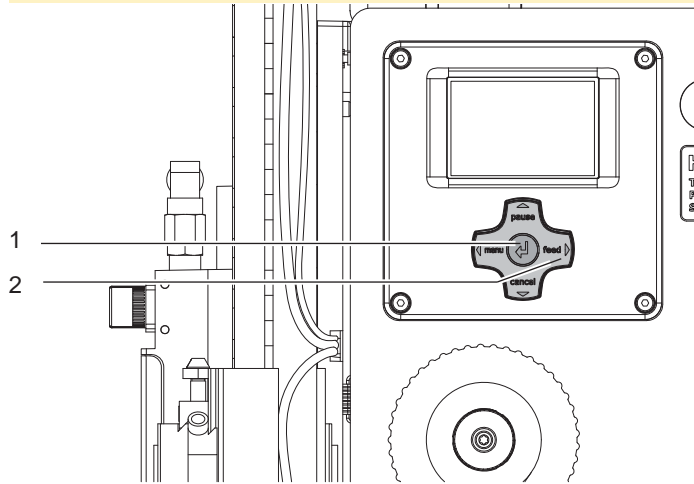


Fig. 34 Test mode using the enter button ◀ (1)

**Note!**

► Please use the test mode to adjust the parameter "peel position" in the printer configuration.

The whole labelling process can be simulated without the need of a print job or a connection to a computer by alternately pressing the **feed** (2) button and the Enter button ◀ (1):

- Press the **feed** button (2).  
A blank label is fed. The vacuum at the pad as well as the supporting air (blow tube) are switched on. After the label has been picked up by the pad, the supporting air is switched off.
- Press the Enter button ◀ (1).  
The pad is moved to the labelling position. A sensor signals when the labelling position is reached. The vacuum is switched off and the label is placed onto the product. Then, the pad is moved back into the starting position.

## 9.2 Test Mode with Print Job

**Note!**

► Please use that test mode to adjust the peel-off offset in the software.

That method allows to check labelling process with the real print data using the Enter button ◀ (1).

- Send a print job.

The test mode is executed in two half cycles:

- Press the Enter button ◀ (1).

**Half cycle 1**

A label is printed. The vacuum at the pad as well as the supporting air (blow tube) are switched on. After the label has been picked up by the pad, the supporting air is switched off.

- Press the Enter button ◀ (1) again.

**Half cycle 2**

The pad is moved to the labelling position. A sensor signals when the labelling position is reached. The vacuum is switched off and the label is placed onto the product. Then, the pad is moved back into the starting position.

If the label is manually removed from the pad after the first half cycle, the half cycle 1 will be repeated when the pre-dispense button is pressed again.

## 10.1 Retainer Assembly

No	Part No.	Description	PU	Note	Serial No.	
					from	to
1	5902489.001	Screw DIN7984-M4x8	10			
2.1	5964129.001	Cover	1	L		
2.2	5964260.001	Cover	1	R		
3	5964367.001	Knurled Screw	1			
4	5964104.001	Set Screw	1			
5	5904544.001	Spring	10			
6	5964090.001	Bar	1			
7.1	5964429.001	Plate	1	L		
7.2	5964438.001	Plate	1	R		
8	5902021.001	Screw DIN7991-M3x6	10			
9	5903525.001	E-Ring DIN6799-4	10			
10.1	5964036.001	Base Plate	1	L		
10.2	5964185.001	Mounting Plate	1	R		

No	Part No.	Description	PU	Note	Serial No.	
					from	to
11.1	5964318.001	Adapter Profile	1	A/B		
11.2	5970013.001	Adapter Profile	1	L/C		
11.3	5970014.001	Adapter Profile	1	R/C		
12	5902167.001	Screw DIN912 M5x50	10			
13.1	5964312.001	Crossbeam	1	L/D		
13.2	5964331.001	Crossbeam	1	R/D		
13.3	5964332.001	Crossbeam	1	L/E		
13.4	5964333.001	Crossbeam	1	R/E		
14.1	5964310.001	Clamping Element	1	L		
14.2	5964328.001	Clamping Element	1	R		
15	5964062.001	Binder	1			
98	5966530.001	Eccentric	1			
99	5966529.001	Hinges	1			

Notes	L	L
	R	R
	A	200H
	B	300H
	C	400H
	D	4114
	E	4116

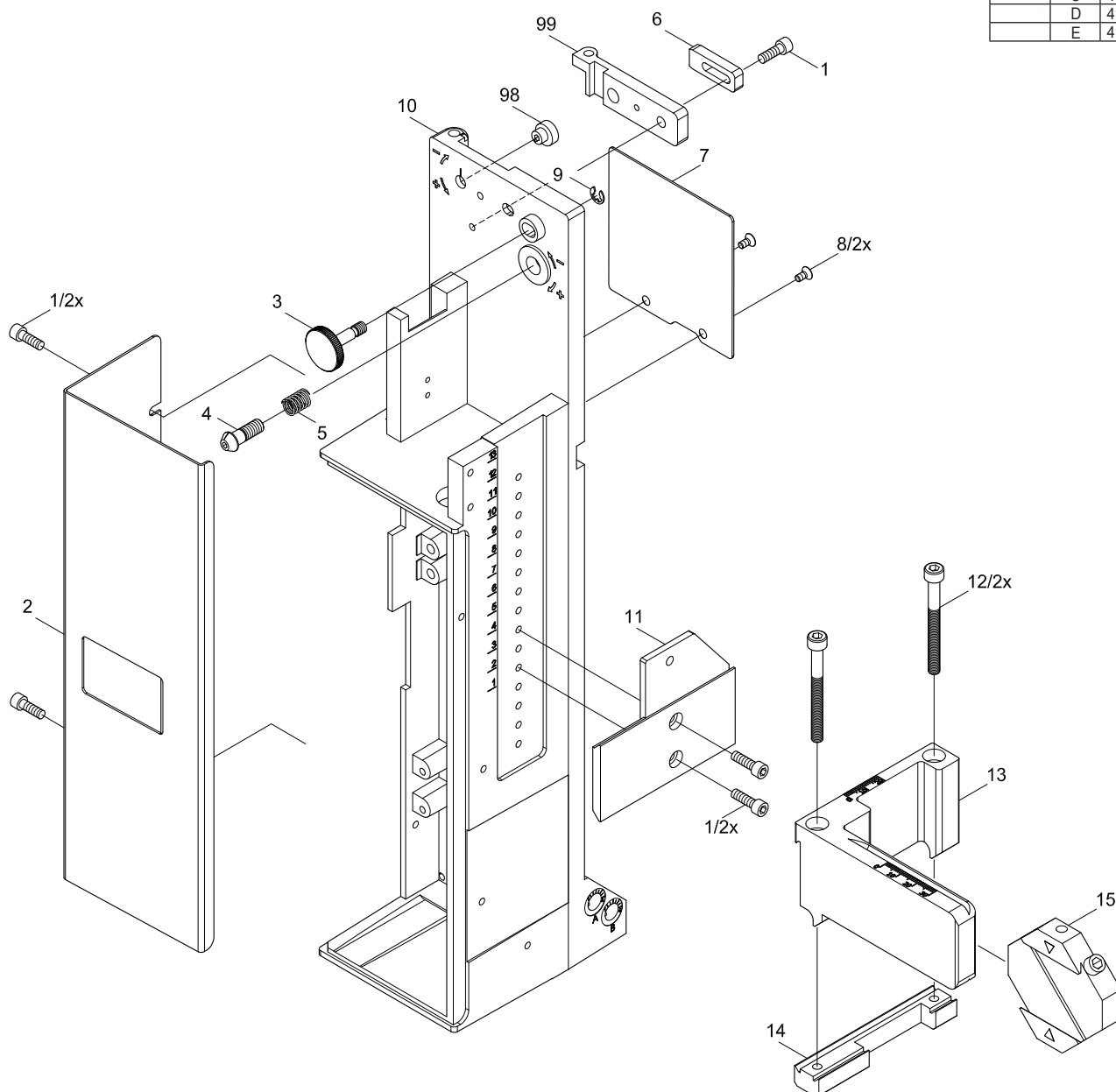


Fig. 35 Retainer assembly - spare parts

## 10.2 Pneumatics Retainer Assembly

No	Part No.	Description	PU	Note	Serial No.	
					from	to
1	5902489.001	Screw DIN7984-M4x8	10			
16	5902863.001	Screw DIN7984 M4x25	10			
17	5905285.001 FESTO 153276	Push-in L-Connector QSLF-1/8-8-B	1			
18	5905284.001 FESTO 153296	Block Valve HE-3-1/8-1/8	1			
19	5906656.001 FESTO 153023	Push-in/threaded Fitting QSF-1/8-6-B	1			
20	5966460.001 FESTO 152584	Tube PUN 4x0,75-SI	2m			
21	5966463.001 FESTO 159663	Tube PUN-4x0,75-SW	2m			
22	5966464.001 FESTO 159665	Tube PUN-6x1-SW	2m			
23	5966465.001 FESTO 159667	Tube PUN-8x1,25-SW	2m			
24	5966466.001 FESTO 152822	Tube PUN-4x0,75-DUO-SI	2m			
26	5905371.001 FESTO 153371	Push-in Y-Fitting QSMY-4	1			

No	Part No.	Description	PU	Note	Serial No.	
					from	to
27.1	5966651.001	Valve Block	1	L		
27.2	5966655.001	Valve Block	1	R		
28	5906021.001	Valve	1			
29	5906022.001	Valve	1			
32	5905317.001 FESTO 153336	Push-in L-Connector QSML-1/8-6	1			
33	5906844.001 FESTO 193509	Vacuum Generator VN-10-H-T3-PI4-VI4-RO1	1			
34	5905257.001 FESTO 2307	Silencer U-1/8	1			
36	5905338.001 FESTO 153355	Push-in T-Connector QSM-T-1/8-4	1			
38	5905283.001 FESTO 153315	Push-in/threaded Fitting QSM-M5-4-I	1			
39.1	5964277.001	Blow Tube	1	F		
39.2	5964095.001	Blow Tube	1	G		
39.2	5964614.001	Blow Tube	1	H		
86	5966414.001	Pressure Reduce Valve	1			

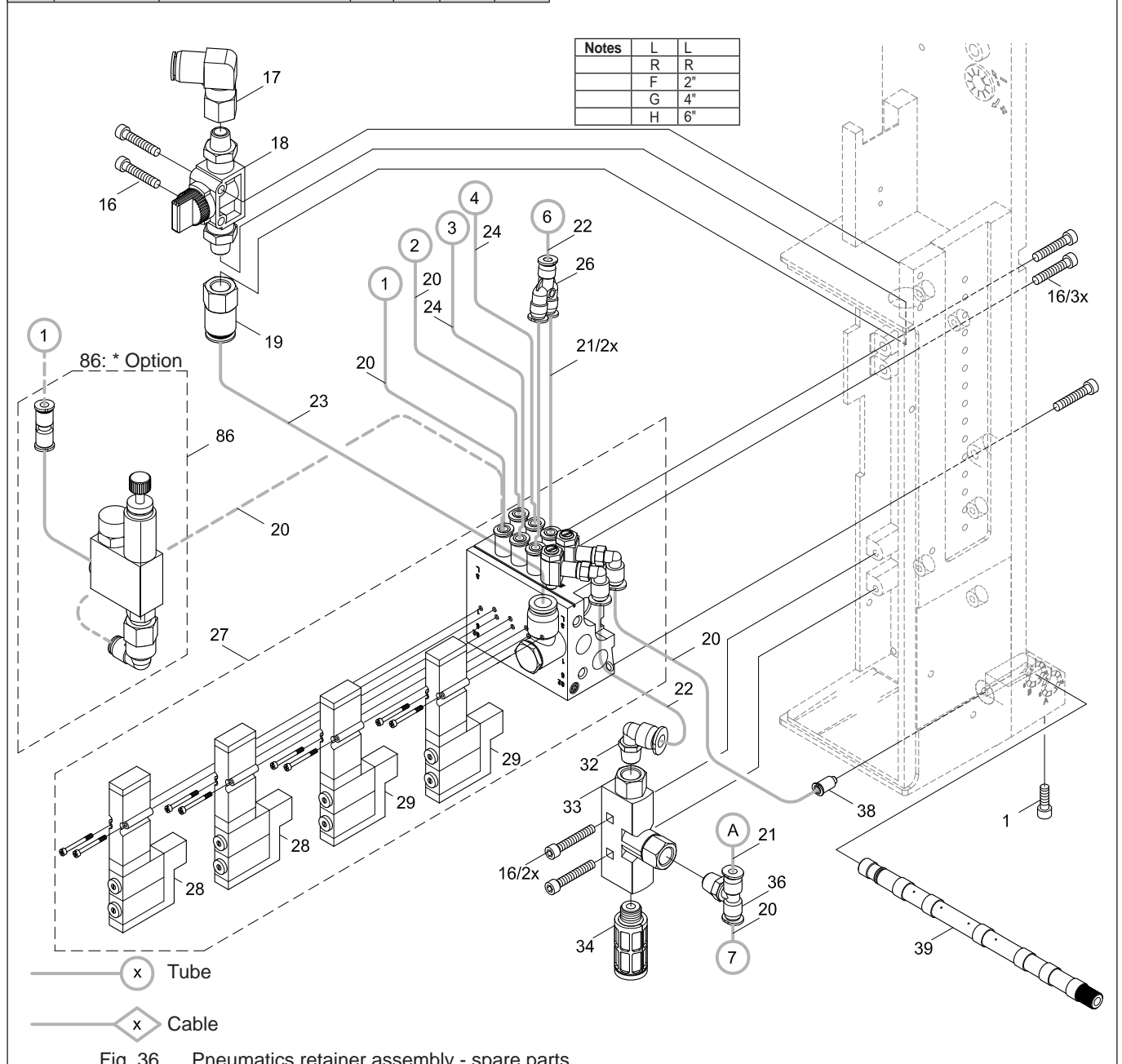


Fig. 36 Pneumatics retainer assembly - spare parts

10.3 Electronics Retainer Assembly

No	Part No.	Description	PU	Note	Serial No.	
					from	to
21	5966463.001 FESTO 159663	Tube PUN-4x0,75-SW	2m			
41	5955586.001	Cable	1			
42.1	5964590.001	Cable	1	A		
42.2	5964591.001	Cable	1	B		
42.3	5964592.001	Cable	1	C		
43	5902571.001	Screw DIN7984-M4x6	10			
44.1	5955579.001	Applicator Interfaces	1	L		6123
44.1	5971416.001	PCB Applicator Interfaces	1	L	6124	
44.2	5964188.001	Applicator Interfaces	1	R		6123
44.2	5971417.001	Applicator interfaces	1	R	6124	
45	5955585.001	PCB Valve Block	1			
46.1	5964454.001	Sensor	1	A		
46.2	5964494.001	Sensor	1	B		
46.3	5964495.001	Sensor	1	C		
47.1	5964490.001	Sensor	1	A		
47.2	5964594.001	Sensor	1	B		
47.3	5964595.001	Sensor	1	C		

No	Part No.	Description	PU	Note	Serial No.	
					from	to
48	5964096.001	EEPROM	1			
49	5955575.001	Applicator Control	1			
50	5964041.001	Holder	1			
51	5902144.001	Screw DIN7984-M3x5	10			
52	5964045.001	Bracket	1			
53.1	5964416.001	Sensor Start Position Cyl.Y	1	A		5751
53.1	5971186.001	Sensor Start Position Cyl.Y	1	A	5752	
53.2	5964496.001	Sensor Start Position Cyl.Y	1	B		5751
53.2	5971187.001	Sensor Start Position Cyl.Y	1	B	5752	
53.3	5964497.001	Sensor Start Position Cyl.Y	1	C		5751
53.3	5971188.001	Sensor Start Position Cyl.Y	1	C	5752	
54.1	5964498.001	Sensor End Position Cyl.Y	1	A		5751
54.1	5971189.001	Sensor End Position Cyl.Y	1	A	5752	
54.2	5964499.001	Sensor End Position Cyl.Y	1	B		5751
54.2	5971193.001	Sensor End Position Cyl.Y	1	B	5752	
54.3	5964500.001	Sensor End Position Cyl.Y	1	C		5751
54.3	5971194.001	Sensor End Position Cyl.Y	1	C	5752	
97	5906943.001	Sealing Ring	10			

Notes	L	L
	R	R
	A	200H
	B	300H
	C	400H
	D	4114
	E	4116

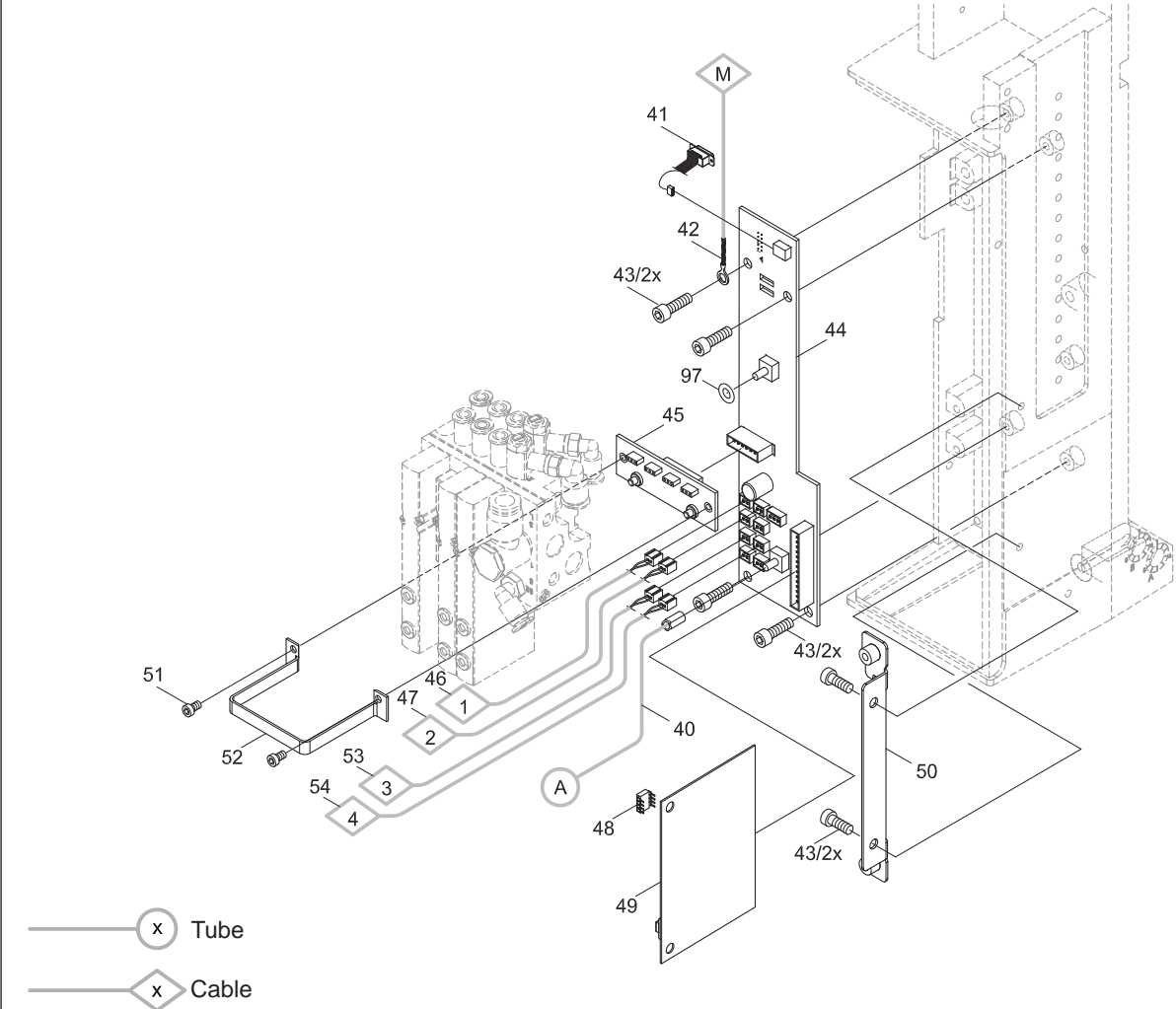


Fig. 37 Electronics retainer assembly - spare parts



## 10.4 Guiding and Cylinder Assembly Y

No	Part No.	Description	PU	Note	Serial No.	
					from	to
24	5966466.001 FESTO 152822	Tube 2x Ø 4 PUN-4x0,75-DUO-SI	1			
30.1	5964246.001	Plate	1	D		
30.2	5971163.001	Plate	1	E		
31	5902281.001	Screw DIN7984-M5x12	10			
47.1	5964490.001	Sensor End Pposition Cyl.Z	1	A		
47.2	5964594.001	Sensor End Pposition Cyl.Z	1	B		
47.3	5964595.001	Sensor End Pposition Cyl.Z	1	C		
53.1	5964416.001	Sensor Start Position Cyl.Y	1	A		5751
53.1	5971186.001	Sensor Start Position Cyl.Y	1	A	5752	
53.2	5964496.001	Sensor Start Position Cyl.Y	1	B		5751
53.2	5971187.001	Sensor Start Position Cyl.Y	1	B	5752	
53.3	5964497.001	Sensor Start Position Cyl.Y	1	C		5751
53.3	5971188.001	Sensor Start Position Cyl.Y	1	C	5752	
54.1	5964498.001	Sensor End Pposition Cyl.Y	1	A		5751
54.1	5971189.001	Sensor End Pposition Cyl.Y	1	A	5752	
54.2	5964499.001	Sensor End Pposition Cyl.Y	1	B		5751
54.2	5971193.001	Sensor End Pposition Cyl.Y	1	B	5752	
54.3	5964500.001	Sensor End Pposition Cyl.Y	1	C		5751
54.3	5971194.001	Sensor End Pposition Cyl.Y	1	C	5752	
55	5964343.001	Stopper	1			
56	5964364.001	Stopper	1			
57	5964061.001	Setting Screw	1			
58	5965966.001	Sliding Carriage	1			
59	5964302.001	Plate	1			
60	5903505.001	E-Ring DIN6799-5	10			

No	Part No.	Description	PU	Note	Serial No.	
					from	to
61	5964301.001	Holder	1			
62	5902562.001	Screw DIN7984-M4x14	10			
63	5521159.001	Nut	1			
64	5964351.001	Stopper	1			
65.1	5964417.001	Tamp Retainer	1	L		
65.2	5964241.001	Tamp Holder	1	R		
66	5964311.001	Adapter Bolt	1			
67.1	5905069.001	Spring	1			
67.2	5905049.001	Spring	1			
68	5521157.001	Washer	1			
69	5521158.001	Washer	1			
70	5903501.001	E-Ring DIN6799-7	10			
71.1	5906953.001 SMC MXH6-10	Cylinder MXH6-10	1			5751
71.2	5906690.001 FESTO 170486	Mini Slide Cylinder SLS-6-10-P-A	1			5752
72.1	5964456.001	Adapter	1	D		
72.2	5974610.001	Adapter	1	E		
73	5905255.001 FESTO 153333	Push-in L-Connector QSML-M5-4	1			
74	5906636.001 FESTO 175094	One-way Flow Control Valve SMBR-8-16	1			
75	5902018.001	Screw DIN912-M3x16	10			
101	5905371.001	Push-in Y-Fitting	1			
102	5902838.001	Screw DIN7984-M3x6	10			

Notes	L	L
	R	R
	A	200H
	B	300H
	C	400H
	D	4114
	E	4116

67.1: Labeling from above and horizontally  
67.2: Labeling from below

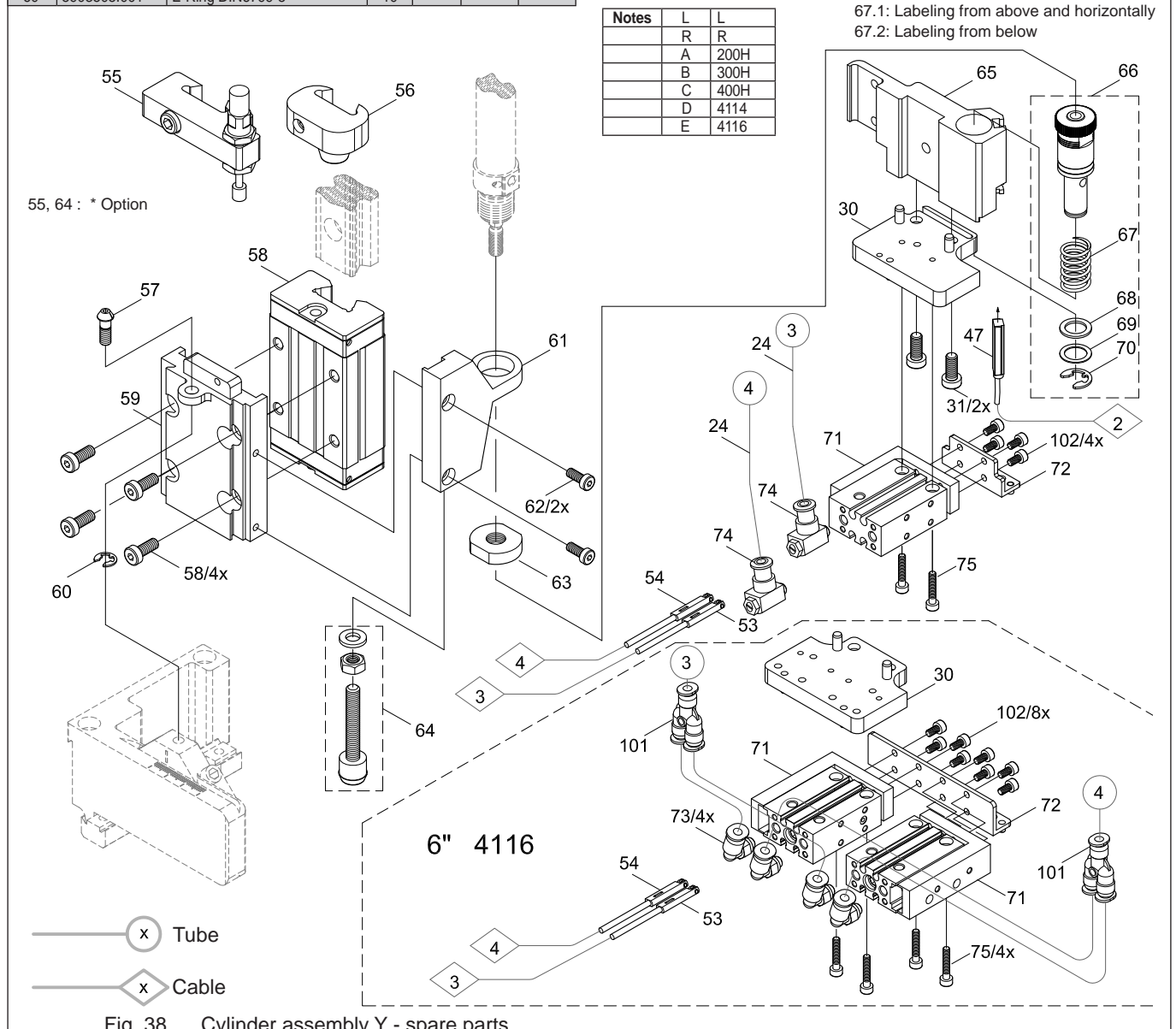


Fig. 38 Cylinder assembly Y - spare parts

## 10.5 Cylinder Assembly Z

No	Part No.	Description	PU	Note	Serial No.	
					from	to
1	5902489.001	Screw DIN7984-M4x8	10			
20	5966460.001 FESTO 152584	Tube Ø 4 PUN 4x0,75-SI	1			
22	5966464.001 FESTO 159665	Tube Ø 6 PUN-6x1-SW	1			
42.1	5964590.001	Cable	1	A		
42.2	5964591.001	Cable	1	B		
42.3	5964592.001	Cable	1	C		
46.1	5964454.001	Sensor	1	A		
46.2	5964494.001	Sensor	1	B		
46.3	5964495.001	Sensor	1	C		
74	5906636.001 FESTO 17505	One-way Flow Control Valve GRLA-M5-QS-4-LF-C	1			
76.1	5964373.001	Energy Track	1	A		
76.2	5964374.001	Energy Track	1	B		
76.3	5964375.001	Energy Track	1	C		
77	5902047.001	Screw DIN7991-M3x5	10			
78.1	5964347.001	Bracket	1	L/A		
78.2	5964357.001	Bracket	1	L/B		
78.3	5964358.001	Bracket	1	L/C		
78.4	5964396.001	Bracket	1	R/A		
78.5	5964398.001	Bracket	1	R/B		
78.6	5964402.001	Bracket	1	R/C		
79.1	5964306.001	Guide Rail	1	A		
79.2	5964307.001	Guide Rail	1	B		
79.3	5964308.001	Guide Rail	1	C		
80	5964443.001	Bolt	1			

No	Part No.	Description	PU	Note	Serial No.	
					from	to
81	5964489.001	Knurled Nut	1			
82	5905593.001 FESTO 175094	Mounting Clip SMBR-8-16	1			
83.1	5906938.001 FESTO 19235	Cylinder DSNU-16-200-PPV-A	1	A		
83.2	5905973.001 FESTO 14320	Cylinder DSNU-16-300-PPV-A	1	B		
83.3	5906117.001 FESTO 14320	Cylinder DSNU-16-400-PPV-A	1	C		
84.1	5964440.001	Cover	1	L/A		
84.2	5964483.001	Cover	1	L/B		
84.3	5964484.001	Cover	1	L/C		
84.4	5964451.001	Cover	1	R/A		
84.5	5964453.001	Cover	1	R/B		
84.6	5964485.001	Cover	1	R/C		
85		Pad (customized)				
95	5902224.001	Screw DIN7991-M4x12	10			
96.1	5966524.001	Bracket	1	L		
96.2	5966528.001	Bracket	1	R		
100	5902335.001	Screw DIN7984-M6x25	10			

Notes	L	L
	R	R
	A	200H
	B	300H
	C	400H
	D	4114
	E	4116

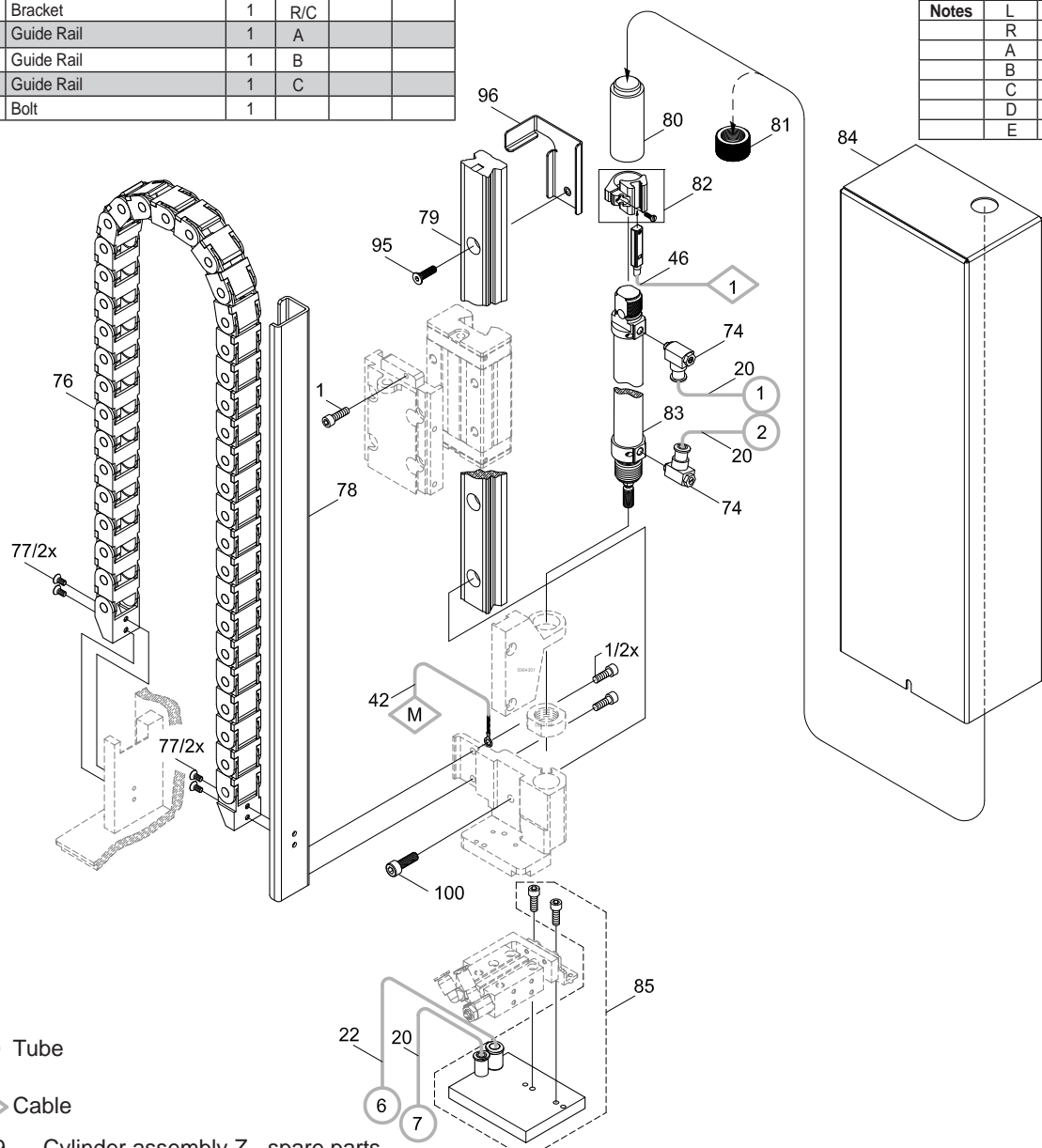


Fig. 39 Cylinder assembly Z - spare parts

## 11.1 Block Diagram

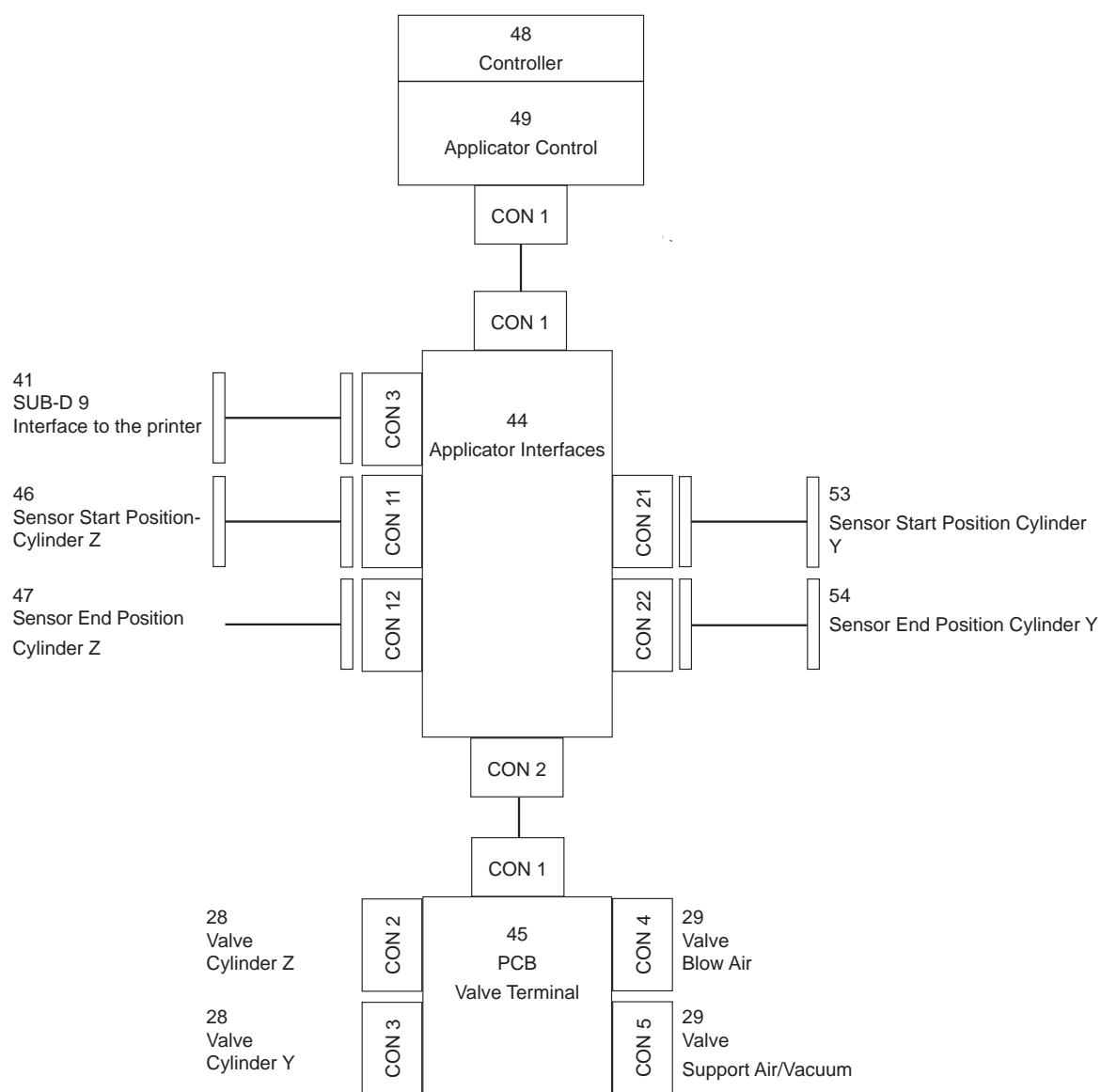


Fig. 40 Block diagram

## 11.2 Pneumatic Drawing Type 4114

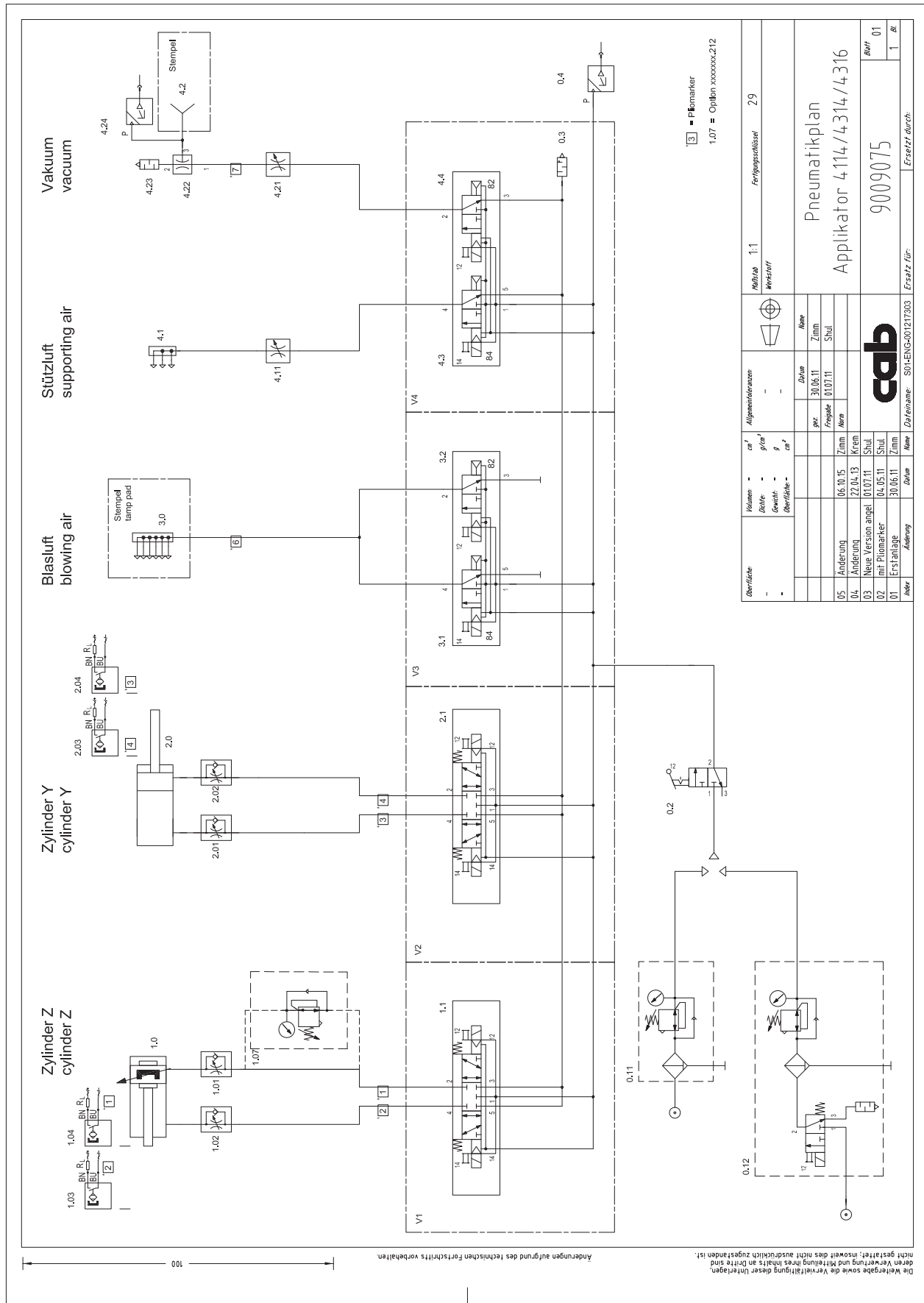
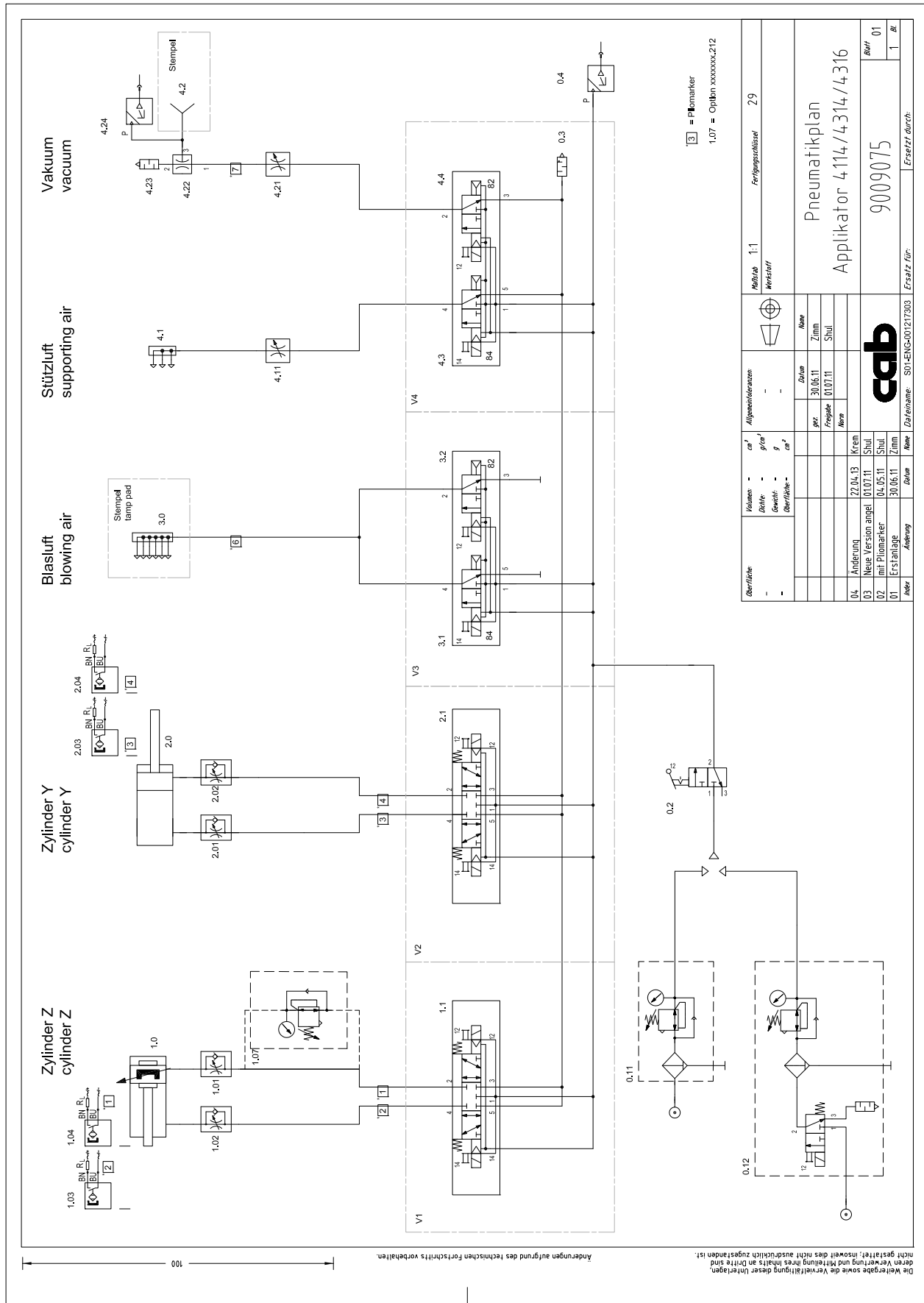


Fig. 41 Pneumatic drawing type 4114

### 11.3 Pneumatic Drawing Type 4116



## 11.4 Label Position Type 4114L/4116L

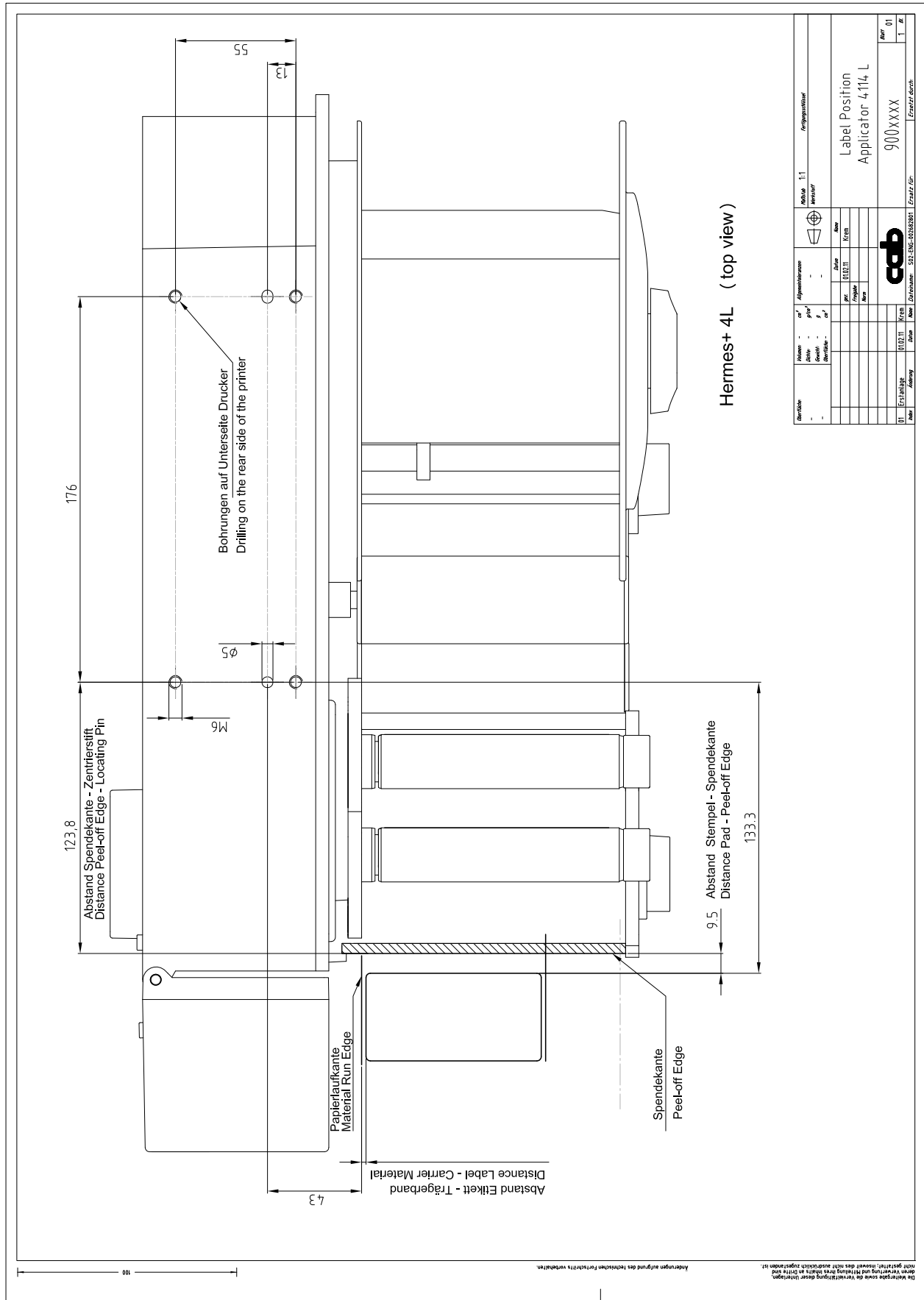


Fig. 43 Label position 4414L/4116L

11.5 Label Position Type 4114R/4116R

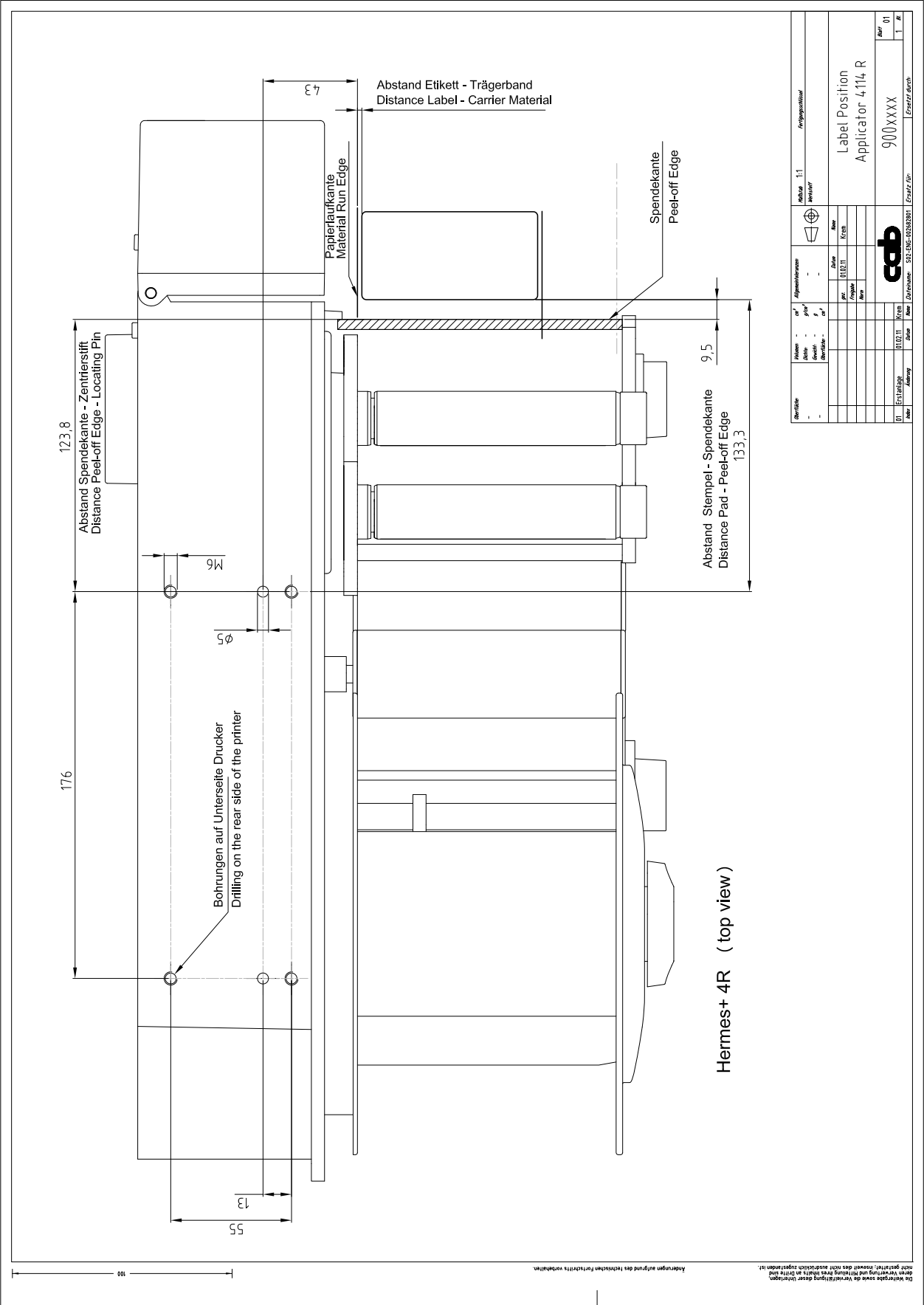


Fig. 44 Label position 4114R/4116R

**B**

Blow Mode.....	24
Blow on.....	30
Blow Tube.....	18

**C**

Cleaning .....	10
Compressed Air .....	19
Controller .....	39
Control System .....	8
Cover .....	16
Cylinder Assembly	
Spare Parts.....	37
Cylinder Y .....	28
Cylinder Z	
Speed .....	25

**D**

Default .....	31
Delay Times.....	30
Dispense Edge .....	20

**E**

Electronics	
Spare Parts.....	36

**F**

Features .....	6
----------------	---

**G**

Guiding	
Spare Parts.....	37

**I**

Intended use.....	4
-------------------	---

**L**

Labelling Sensor.....	26
Lock Diagram .....	39

**M**

Mounting.....	17
---------------	----

**O**

Options .....	27
---------------	----

**P**

Pad .....	18, 20
Parameter.....	31
Peel-off Mode .....	32
Peel-off offset .....	33
Peel position .....	33
Peel Position.....	32
Pressure reduction .....	27
Pressure reduction valve .....	27
Printer .....	12
Printer Setup.....	30
Print Job .....	33

**R**

Retainer	
Spare Parts.....	34

**S**

Sensor .....	39
Sensor Start Position.....	26
Sensors Y .....	28
Speed	
Y.....	28
Z.....	25
Stamp on .....	30
Support Air.....	22

**T**

Test Mode .....	33
Tools .....	16