



**Stacker with Cutter**

**ST4**

Made in Germany

| Family              | Type  |
|---------------------|-------|
| Stacker with Cutter | ST4/L |
|                     | ST4/M |

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## 1.1 Notes

Important information and instructions 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!**

Advices to make work routine easier or on important steps to be carried out.



### **Environment!**

Advices on protecting the environment.



Handling instruction



Reference to section, position, illustration number or document.



Option (accessories, peripheral equipment, special fittings).

Time Information in the display.

## 1.2 Intended Use

- The device is manufactured in accordance with the current technological status and the recognized safety rules. However, danger to the life and limb of the user or third parties and/or damage to the device and other tangible assets can arise during use.
- The device may only be used for its intended purpose and if it is in perfect working order, and it must be used with regard to safety and dangers as stated in the operating manual.
- The device is intended exclusively as a peripheral device for the cab printers of the A+, XC and XD series for cutting and stacking 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



### **Attention!**

To operate the stacker the printer firmware version 3.19 or higher is required.

- Usage for the intended purpose also includes complying with the operating manual, including the manufacturer's maintenance recommendations and specifications.



### **Note!**

The complete documentation can also currently be found in the Internet.

### 1.3 Safety Instructions

- Disconnect the printer from the electrical outlet before mounting or removing the stacker (2).
- When using the stacker with printers of the A+ series the stacker protrudes the base plate of the printer. Therefore the system must be positioned at the edge of the platform or on a mounting unit. Position the system in such a way that a risk of tilting will be avoided.
- The stacker may only be operated when it is mounted on the printer.
- Risk of injury, particularly during maintenance, the cutter blades (3,4) are sharp.
- Operate the stacker with properly mounted safety covers (5) only.
- Mount matching safety covers (5) when adapting the stacker for another material width. For a table width greater than 95 mm for ST4/L or 80 mm for ST4/M no safety covers are needed.
- When the table (6) is not mounted or it is lowered manually the blades (3,4) are accessible. Do not operate the stacker under these circumstances. Do not touch the area of the blades.
- Warning stickers (1,2) must not be removed, as then you and other people cannot be aware of dangers and may be injured.

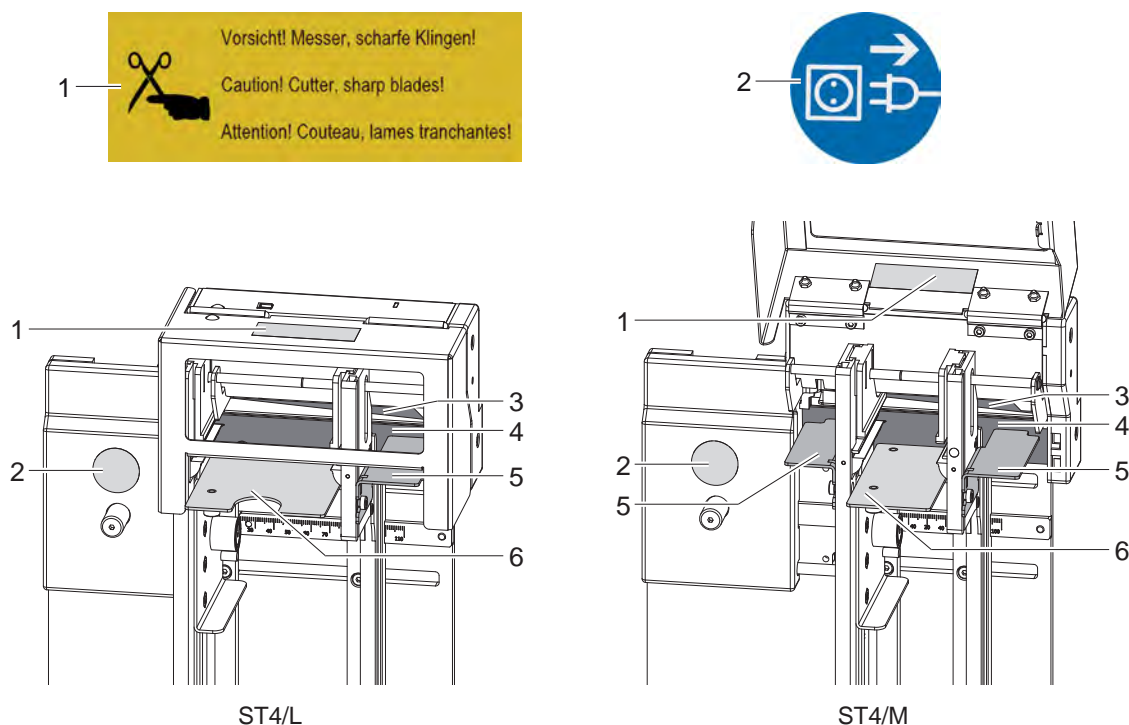


Figure 1 Safety covers, safety marking

- The device may only be used in a dry environment, do not expose it to moisture (sprays of water, mists, etc.).
- Do not use the device in an explosive atmosphere.
- Do not use the device close to high-voltage power lines.
- Perform only those actions described in this operating manual.  
Work going beyond this may only be performed by trained personnel or service technicians.
- Unauthorized interference with electronic modules or their software can cause malfunctions.
- Other unauthorized work on or modifications to the device can also endanger operational safety.
- Always have service work done in a qualified workshop, where the personnel have the technical knowledge and tools required to do the necessary work.
- The maximum sound pressure level is less than 70 dB(A).



#### 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.

## 1.4 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 printer enables it to be easily disassembled into its component parts.

- Send the parts for recycling.
- Take the electronic circuit boards to public waste disposal centers or to the distributor.

## 1.5 Technical Data

|  | ST4/L                                      | ST4/M            |
|--|--|------------------|
| Usability                                      |  |                  |
| for printer type                               | A4+, XC4                                   | A4+M, A4+T, XD4T |
| Power rating                                   |  |                  |
| Cuts / min                                     | 120  |                  |
| Print stop if :                                | unable to reach end position of the cutter |                  |
|  | cover open                                 |                  |
|  | maximum stack height is reached            |                  |
| Material                                       |  |                  |
| Weight g/m² for cardboard                      | 60 - 300                                   |                  |
| Recommended core diameter of the media roll mm | ≥ 100                                      |                  |
| Thickness mm                                   | 0,05 - 0,8                                 |                  |
| Width mm                                       | 20 - 110                                   | 20-100           |
| Cut length mm                                  | 20 - 150                                   |                  |
| Outlet height up to mm                         | 1,2  |                  |
| Stacking                                       |  |                  |
| Height mm                                      | max. 100                                   |                  |

Table 1 Technical Data

## 1.6 Device Overview

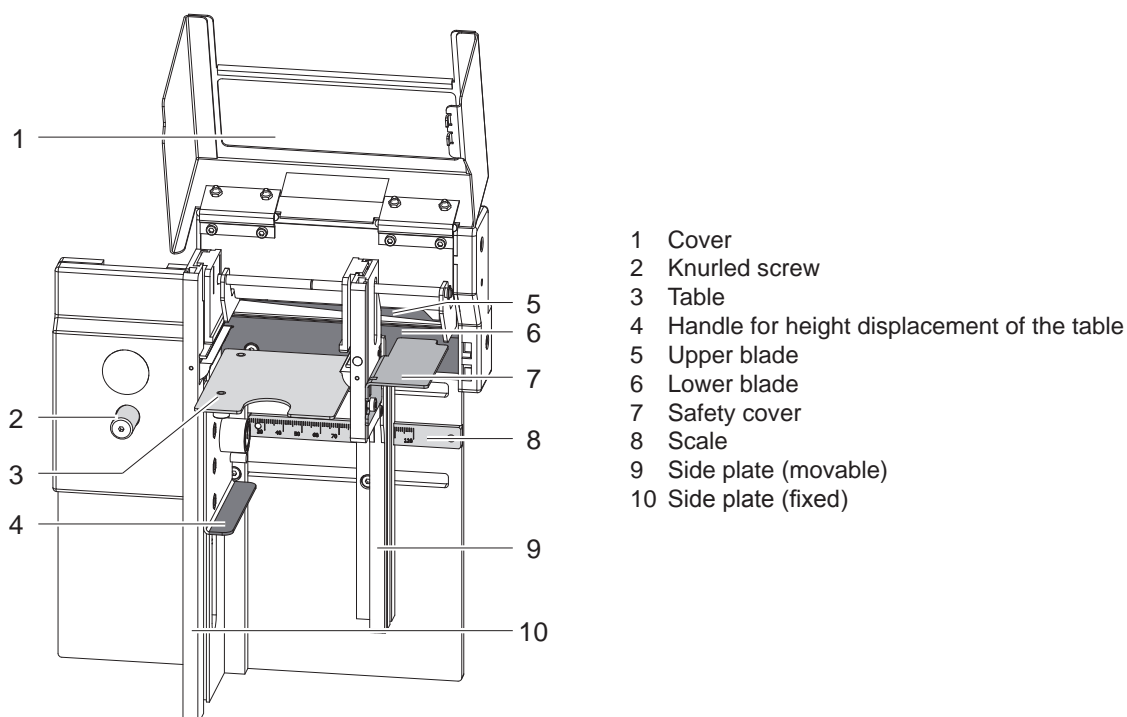


Figure 2 Overview ST4/L

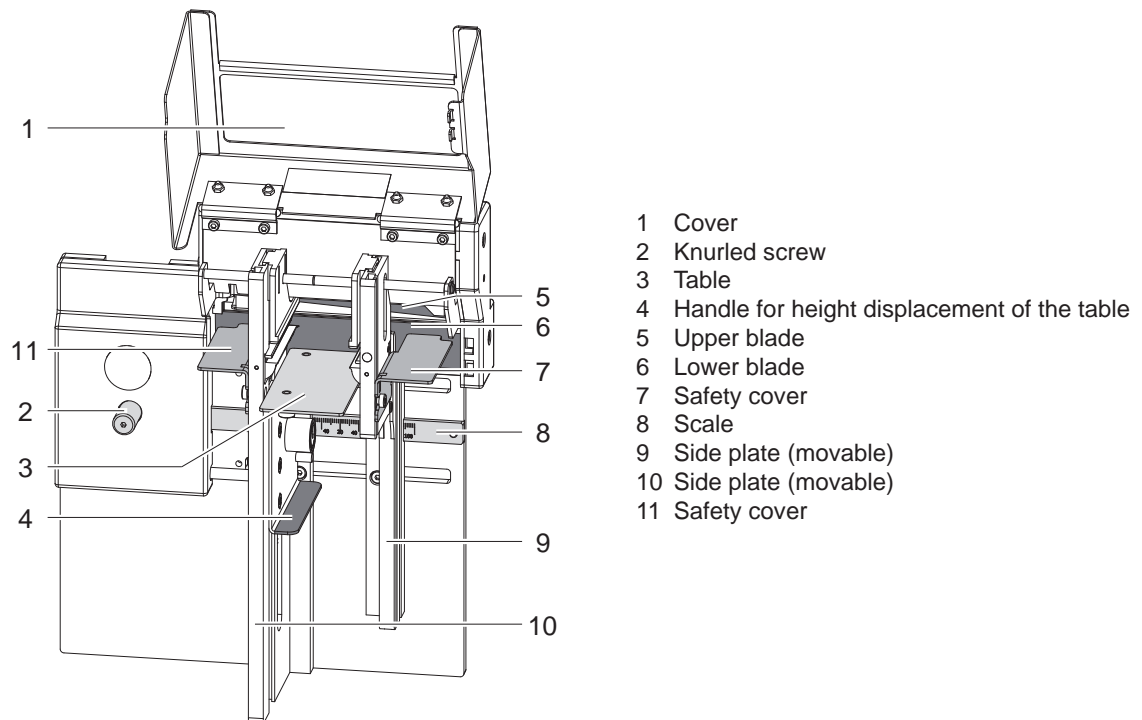


Figure 3 Overview ST4/M

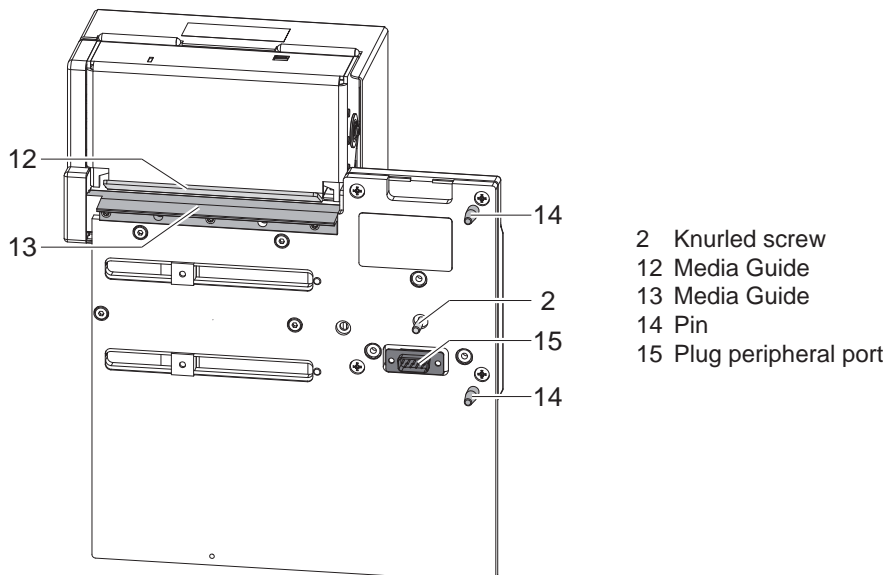


Figure 4 Rear view

## 2.1 Unpacking

- ▶ Check stacker for damage which may have occurred during transport.
- ▶ Check delivery for completeness.

Contents of delivery:

- Stacker with cutter
- Documentation



### Note!

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



### Attention!

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

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

## 2.2 Preparing the Printer

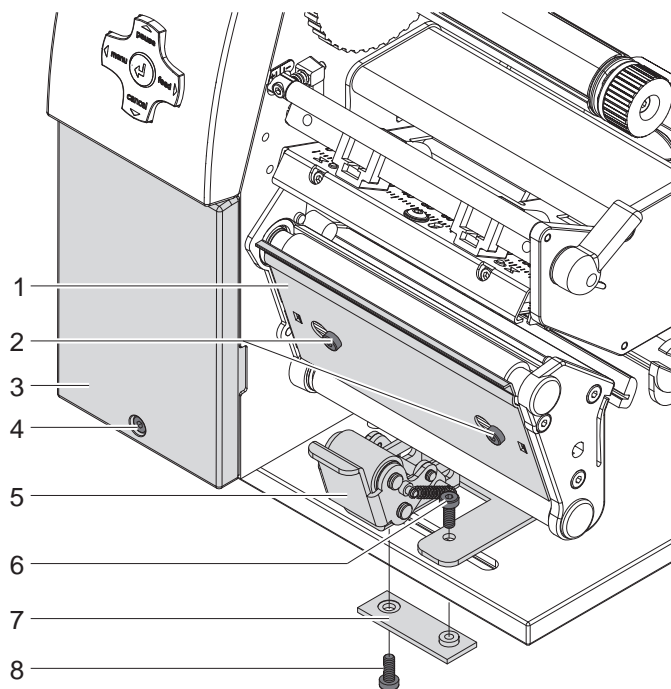


Figure 5 Preparing the printer

### Removing Tear-off Plate, Dispense Plate or Rewind Guide Plate

1. Loosen screws (2) several turns.
2. Slide plate (1) to the right and remove it.

### Removing Cover or Present Sensor

1. Loosen screw (4).
2. Remove cover (3) or present sensor.

### Removing the Locking System

1. Position printer at edge of table so that the oblong hole is accessible from below.
2. Screw out screws (6,8) and remove them.
3. Remove the pinch roller (5) and bottom plate (7).



### 2.3 Mounting the Stacker to the Printer

**Attention!**

► Disconnect the printer from the electrical outlet before mounting or removing the stacker.

**Caution!**

Risk of tilting.

When using the stacker with printers of the A+ series the stacker protrudes the base plate of the printer. Therefore the system must be positioned at the edge of the platform or on a mounting unit.

► Position the system in such a way that a risk of tilting will be avoided.

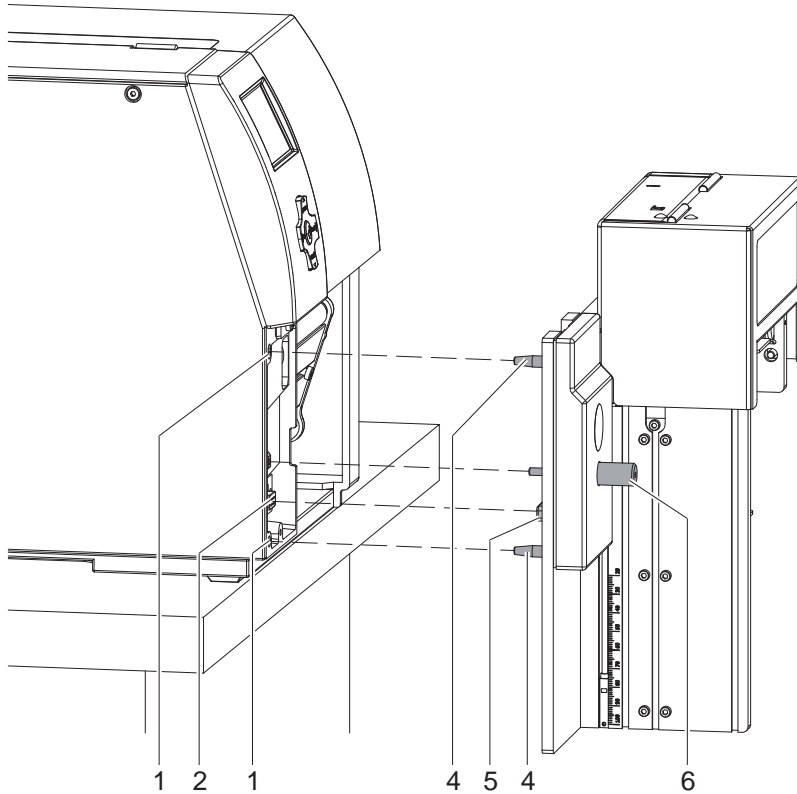


Figure 6 Mounting the stacker

1. Insert the pins (4) of the stacker into the holes (1) of the printer.
2. Press the stacker against the printer. That way the plug (5) of the stacker will be connected to the peripheral port (2) of the printer.
3. Secure the stacker with the screw (6).

## 2.4 Adapting the Stacker to the Media Size



### Caution!

Risk of injury!

With inappropriate tables and safety covers the reliability and machinery safety cannot be guaranteed.

► Equip the stacker only with a table designated for the media to be used and the matching safety covers.

### 2.4.1 Adjusting the Side Plates

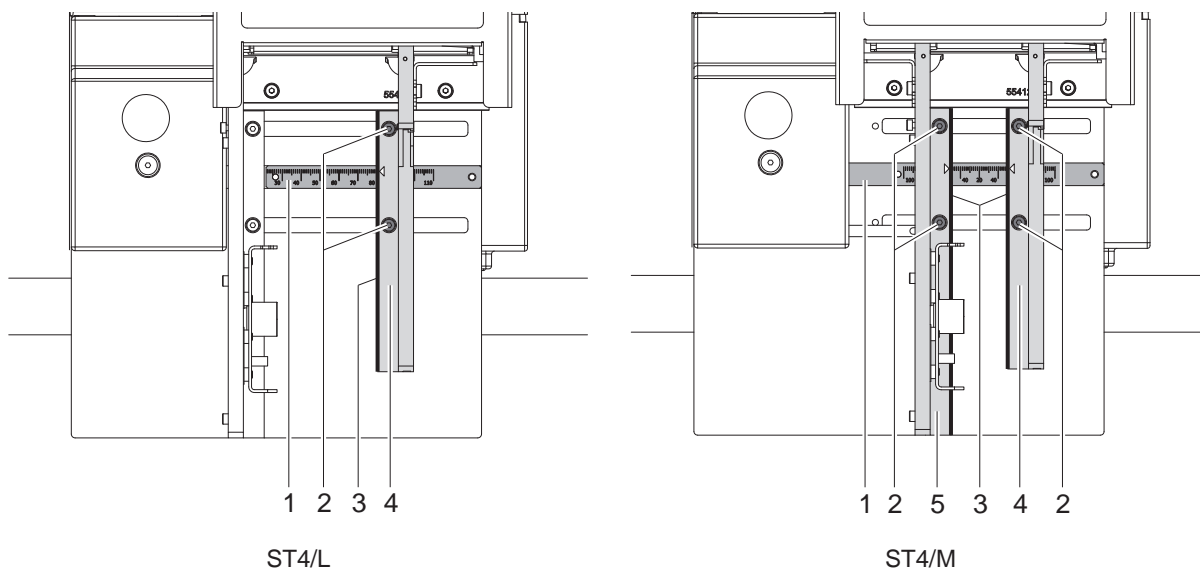


Figure 7 Adjusting the Side Plates

- At ST4/L adjust side plate (4) only.
- At ST4/M adjust both side plates (4,5).

For it :

1. Loosen screws (2).
2. Adjust the side plates (4,5) to the media width using the scale (1). Use the edges (3) of the side plates as pointers.
3. Tighten screws (2).

### 2.4.2 Mounting the Table

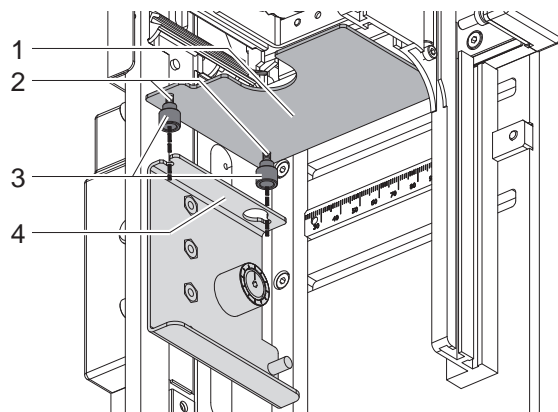


Figure 8 Mounting the table

1. Loosely screw the knurled nuts (3) contained in the delivery contents of the table onto the threaded pins (2).
2. Insert the threaded pins of the table (1) into the holes of the retainer (4) and move the table to the printer until it stops.
3. Tighten the knurled nuts (3).

## 2.4.3 Mounting the Safety Covers

**Caution!**

**Risk of injury!**

Without safety covers or with improperly mounted safety covers the reliability and machinery safety cannot be guaranteed.

- ▶ Equip the stacker only with safety covers designated for the media to be used.
- ▶ Mount the safety covers in the correct position.

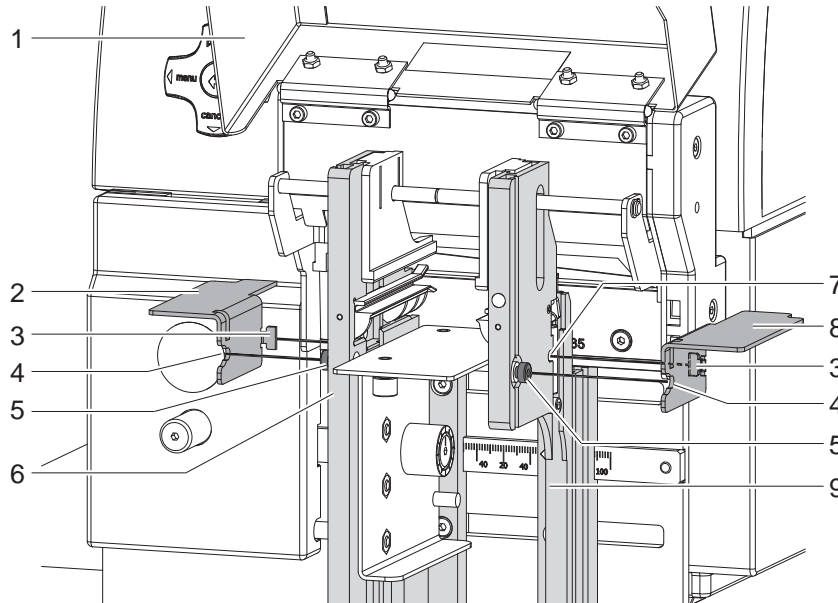


Figure 9 Mounting the safety covers

**Note!**

For a table width greater than 95 mm for ST4/L or 80 mm for ST4/M no safety covers are needed.

- ▶ At ST4/L mount safety cover (5) only.
- ▶ At ST4/M mount two safety covers (2,5).

For it :

1. Open cover (1).
2. Loosen each one screw (5) in the side plates (6,9) several turns.
3. Place the hooks (3) of the safety covers (2,8) into the slots (7) and slide the slots (4) under the screw heads (5).
4. Tighten the screws (5).
5. Close cover (1).

Once the stacker is connected to the printer, the printer will automatically recognize it on turn on.

The printer can be configured to suit the individual requirements of cut mode in the „Setup“ menu. When the stacker is installed, the „Cutter“ menu will appear.



#### Note!

For detailed instructions for configuration ► **Configuration Manual of the printer.**

For setting the cutter parameters select

Setup -> Machine param. -> Cutter .

| Parameter      | Meaning  | Default |
|----------------|--|---------|
| Cutter         | Configuration of the cutter  |         |
| > Cut position | Offset of the cut position relative to the printed image<br>Cut position with the initial offset value of "0" causes to cut in the middle of the gap between two labels.<br>If the cut position value is positive, the media will be advanced before it is cut, that means the distance between the cut edge and the rear edge of the label increases. | 0       |

Table 2 Cutter parameters



#### Note!

The values of the setup are basic settings for the actual combination printer-stacker w/cutter. After changing the stacker or printer a re-adjustment may be necessary.

Changes required for processing different print jobs should be implemented additional offsets available in the software.

The offset values from setup and software are added together for execution.

Under Setup -> Print parameters the method for recognizing the material and the method of backfeed when using cut mode can be selected.

| Parameter    | Meaning   | Default    |
|--------------|---|------------|
| Label sensor | Method for detecting the starting end of the label.<br>Gap Sensor: Detection using changes in the transparency between the label and label gap.<br>Bottom-Reflect: Detection using reflex marks on the bottom of the medium.<br>Continuos media: Synchronization of the paper feed when using endless media in cutting mode.<br>► After loading media press the <b>feed</b> key.<br>That way a short feed and a synchronization cut are realized.   | Gap sensor |
| Backfeed     | Method for backfeeding the material.<br>Backfeeding is necessary in the cutting mode since the front edge of a second section already passes the print line when the first label is moved to the cut position.<br>always: Backfeeding occurs independently of print contents.<br>smart: Backfeeding only occurs when the print contents of the next section is not yet fully prepared when cutting the current section.<br>Otherwise, the second section is pushed on and completed after removal of the first section without backfeeding. | smart      |

Table 3 Print parameters

- ▶ Load transfer ribbon and endless material as described in the Operator's Manual of the printer  
Use the tear-off mode information for loading endless material for cut mode.
- ▶ Place the media strip between the printhead and the drive roller, so that the front edge of the strip reaches through the cutter.

## 5 Operation

The printer is ready for operation when all connections have been made and all materials are loaded correctly.



### Note!

To operate the cutter with continuous material in the printer menu „Setup“ -> „Print parameters“ -> „Label sensor“ the setting „Endless media“ has to be selected. Otherwise no synchronization cut is carried out.

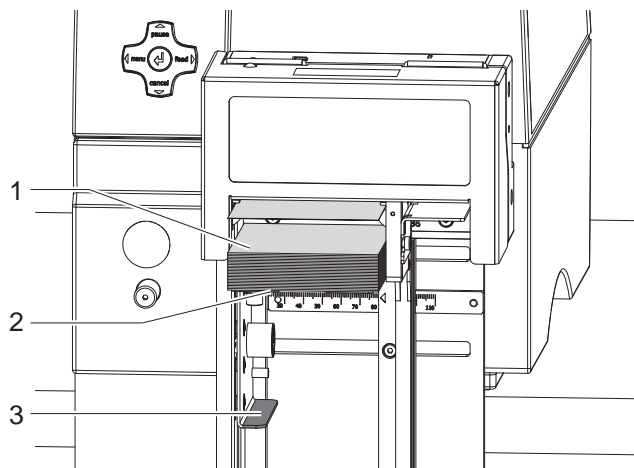


Figure 10 Operation



### Caution!

#### Risk of injury!

With inappropriate tables and safety covers or with manually lowered table the reliability and machinery safety cannot be guaranteed.

- ▶ Operate the stacker only with a table designated for the media to be used and the matching safety covers.
- ▶ Do not operate the stacker when the table is lowered manually.

- ▶ Move the table (2) upwards using the handle (3) until it stops
- ▶ Switch on the printer.  
The cutter performs a cut.
- ▶ Press the feed key. For synchronization the media will be moved forward and cut off.  
Synchronization is not necessary when the printhead was not opened between print jobs, even if the printer was powered off between print jobs.
- ▶ Remove the cuts from the table.
- ▶ Activate the cut mode in the software.  
For direct programming use the C-command (▶ Programming Manual).
- ▶ Send a print job.  
All labels in the job will be printed without stopping and be cut. With the movement of the upper blade the labels will be pressed onto the stack (1) and the table will be moved down little by little.
- When the table reaches the lower end position the print job will be stopped and the error message `Box full` appears in the display of the printer.
- ▶ After the end of the print job or when the error `Box full` occurs, remove the stack from the table.
- ▶ After the error `Box full` resume the print job by pressing the **pause** key.

The maintenance is limited to monthly cleaning of the device.  
The most important is the cleaning of the cutter blades.

**Caution!****Risk of injury!**

- ▶ **Disconnect the printer from the electrical outlet to avoid unintended cutter moves.**
- ▶ **Carefully handle the cutter. The cutter blades are sharp.**

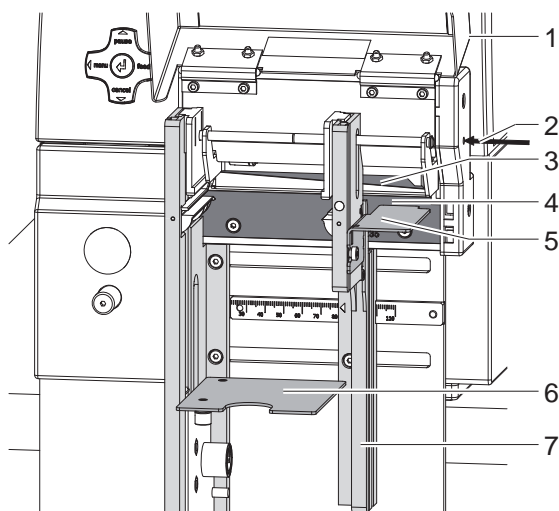


Figure 11 Cleaning the cutter

1. Open cover (1).
2. Move table (6) downwards.
3. Remove safety covers (5 / ▷ 2.4.3 on page 11) and shift the movable side plates (7) apart from each other as far as possible (▷ 2.4.1 on page 10).
4. The cutter shaft can be reached through the hole (2). If necessary turn the cutter shaft with an Allen key (2.5 mm) and that way displace the upper blade (3).
5. Remove dust and paper particles with a soft brush or a vacuum.
6. Remove all deposits at the cutter blades (3,4) with isopropyl alcohol and a soft cloth.

**Note!**

**When cutting through the label material instead of the label gap remains of adhesive may accumulate on the blades. If operating in backfeed mode, such remains of adhesive may be deposited on the drive roller as well.**

- ▶ **Clean often the drive roller (▷ Printer Operator's Manual) and the cutter blades.**

7. Re-adjust the side plates and re-mount the safety covers.
8. Move the table upwards until it stops.
9. Close cover.

General information ► Operator's Manual of the printer.

#### Specific Error Messages concerning the Stacker with Cutter

| Error message  | Cause  | Remedy  |
|----------------|--|---|
| Cutter jammed  | Material too thick   | Change material   |
|                | Bracket on the upper blade collides with safety cover                        | Use safety covers matching to the table width.<br>Re-adjust the movable side plates.                  |
|                | Table does not move downwards while stacking.                                | Reduce the brake of table movement as necessary.  |
| Cutter blocked | Cutter cannot reach the home position within a defined time after cut start. | Switch off the printer. Remove material. Switch on the printer. Restart print job.<br>Change material |
|                | No cutter function   | Switch the printer off and then on.<br>If error recurs call service.                                  |
| Cutter open    | Cover of the stacker is not closed   | Close cover.<br>Press <b>pause</b> key to continue the print job.                                     |
| Box full       | Table has reached the lower end position and cannot take anymore labels.     | Remove stack. Move table upwards until it stops<br>Press <b>pause</b> key to continue the print job.  |

Table 4 Error messages concerning the stacker with cutter

#### Problem Solution

| Problem  | Remedy                               |
|--|--------------------------------------|
| Table moves downwards without cutter action when heavy stacks are produced   | Augment the brake of table movement. |
| When stacking stiff, pre-bulged labels, the media springs upwards and blocks the stacker mechanics or the label output | Reduce the brake of table movement.  |
| Higher stacks become instable caused by the media properties.  | Reduce the maximum stack height.     |

Table 5 Problem Solution

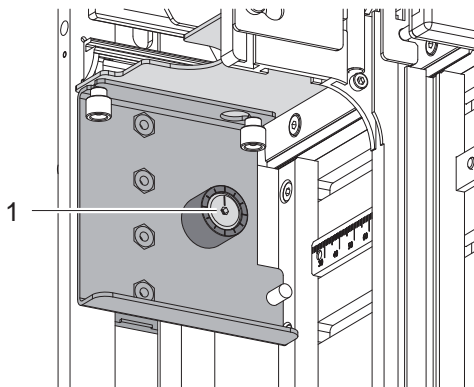


Figure 12 Adjusting the brake for table movement

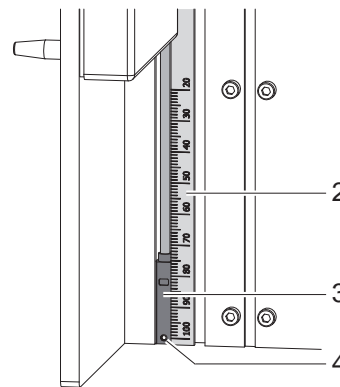


Figure 13 Adjusting the maximum stack height

#### Adjusting the brake for table movement

- Turn magnet (1) with a 2.5 mm Allen key. Clockwise turning will augment the brake.

#### Adjusting the maximum stack height

- Loosen screw (4) with an 1.5 mm Allen key, re-position sensor (3) and re-tighten screw (4). The position of the screw (4) shows at the scale (2) the maximum stack height in mm.

The Stackers with Cutter comply with the relevant fundamental regulations of the EU Rules for Safety and Health:

- Directive 2014/30/EU relating to electromagnetic compatibility
- Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment

#### EU Declaration of Conformity

▷ <https://www.cab.de/media/pushfile.cfm?file=2720> 

