Instructions

Cutter

CSQ 401 / CSQ 402

MADE IN GERMANY

Edition: 04/2023 - **Part No.** 9003435

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Editor

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

Topicality

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Germany
cab Produkttechnik GmbH & Co KG
Karlsruhe
Phone +49 721 6626 0
www.cab.de

USA
cab Technology, Inc.
Chelmsford, MA
Phone +1 978 250 8321
www.cab.de/us

Taiwan
cab Technology Co., Ltd.
Taipei
Phone +886 (02) 8227 3966
www.cab.de/tw

Singapore
cab Singapore Pte. Ltd.
Singapore
Phone +65 6931 9099
www.cab.de/en

France
cab Technologies S.à.r.l.
Niedermodern
Phone +33 388 722501
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Mexico
cab Technology, Inc.
Juárez
Phone +52 656 682 4301
www.cab.de/es

China
cab (Shanghai) Trading Co., Ltd.
Shanghai
Phone +86 (021) 6236 3161
www.cab.de/cn

South Africa
cab Technology (Pty) Ltd.
Randburg
Phone +27 11 886 3580
www.cab.de/za

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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 possible dangers, material damage or loss of quality.

Note!
Gives you tips. They make a working sequence easier or draw attention to important working processes.

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 intended exclusively as an option for the printers of the series SQUIX, XD Q and XC Q for cutting suitable materials.
  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 that manual.
- 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 that manual.

Attention!
For using the cutter the printer firmware version 5.29 or higher is needed.

Note!
All documentations can also currently be found in the Internet.

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.

1.3 Safety Instructions

- Disconnect the printer from the electrical outlet before mounting or removing the cutter.
- The cutter may only be operated when it is mounted on the printer.
- Risk of injury, particularly during maintenance, the cutter blades are sharp.
- 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.
- Warning stickers must not be removed, as then you and other people cannot be aware of dangers and may be injured.

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 device 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

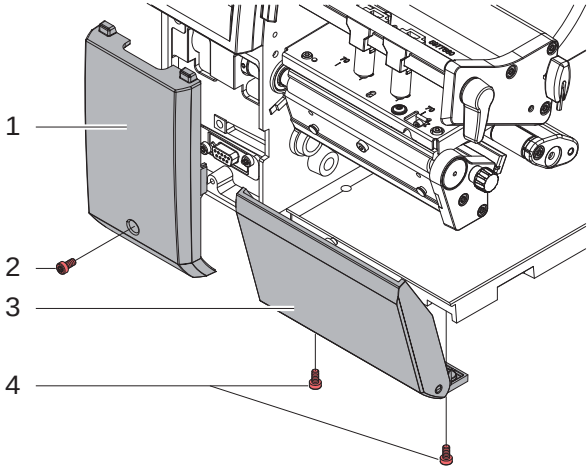
			Cutter			
Technical data			**CSQ 401**		**CSQ 402**	
for printer type			SQUIX 4, SQUIX 4.3	SQUIX 4M, SQUIX 4.3M	SQUIX 4, SQUIX 4.3 XC Q4	SQUIX 4M, SQUIX 4.3M XD Q4 XD Q4.2
Material	**width**	up to mm	120	114	120	114
	weight cardboard	up to g/m²	200		300	
	thickness	up to mm	0,7		1,1	
Cutting length		from mm	10		10	
Gap height		up to mm	2,5		2,5	
Cut frequency		about cuts/min.	120		200	
Cutter Tray for Cutting length		up to mm	100		100	
Monitoring			End position of the blade not reached Blade is swung off Blade cover removed			

Attention!

The minimum cut length is depending on the media, in particular its adhesive characteristics.

- ▶ **Perform preliminary tests. Test the media too, if the media is very hard, very flexible or very thin.**

2.1 Removing Covers

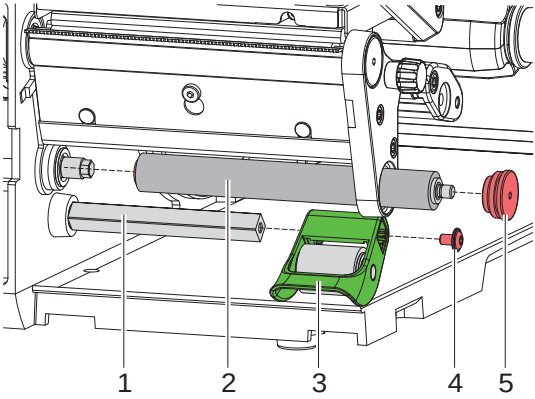


- ▶ Loosen screw (2) and remove cover (1).
- ▶ Loosen screws (4) and remove cover (3).

Attention!
For cutter operation there has to be mounted a tear-off plate or a dispense plate on the printer, to lead the material through the blades of the cutter.

2.2 Preparing a P Version Printer

Attention!
In order to operate a CSQ cutter with a P version SQUIX printer, the locking system (3) and the roller (2) must be removed from the printer.



- ▶ Swing down the pressure system (3) and open it.
- ▶ Loosen the screw (4).
- ▶ Pull the pressure system (3) off the axis (1).

Attention!
Do not reach between the deflection roller (2) and the pressure axis (1).

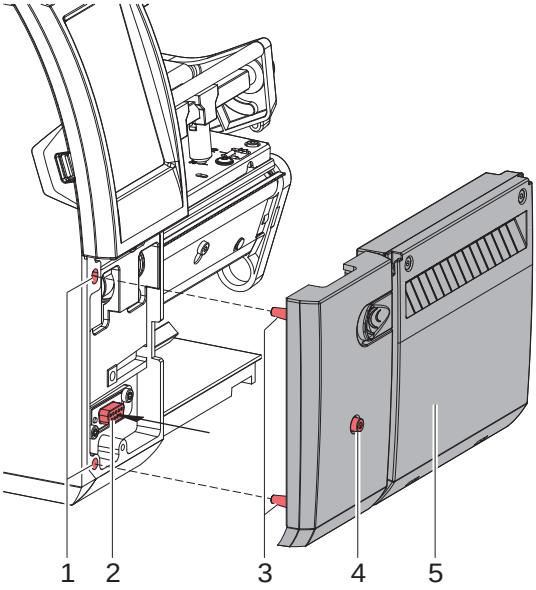
The pressure axis (1) is tensioned by spring force and can turn.

- ▶ Unscrew the roller bearing (5).
- ▶ Pull out the roller (2).

2.3 Mounting Cutter

Attention!

▶ **Disconnect the printer from the electrical outlet before mounting or removing the cutter.**

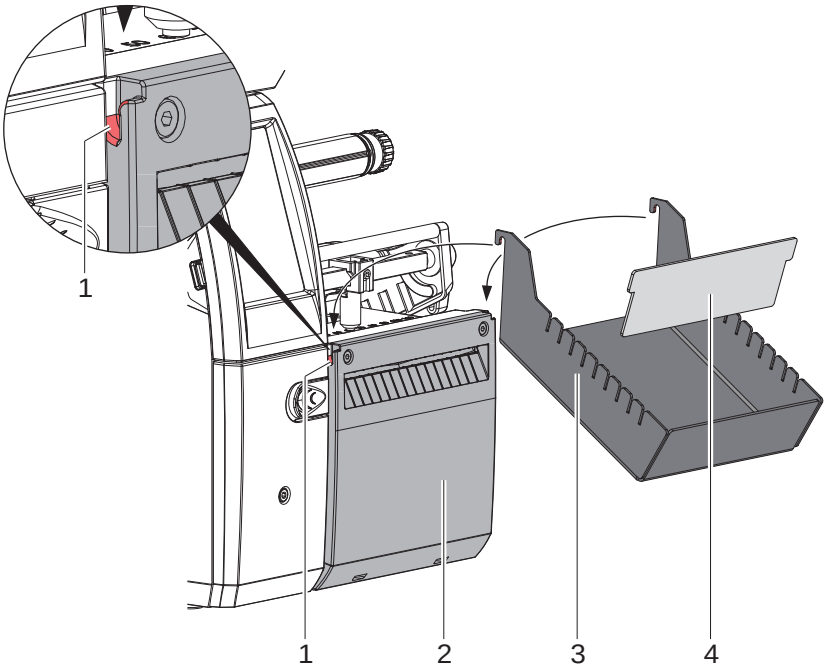


▶ Insert the pins (3) of the cutter (5) into the holes (1) of the printer.

▶ Press the cutter against the printer. That way the plug of the cutter will be connected to the peripheral port (2) of the printer.

▶ Secure the cutter (5) with the screw (4).

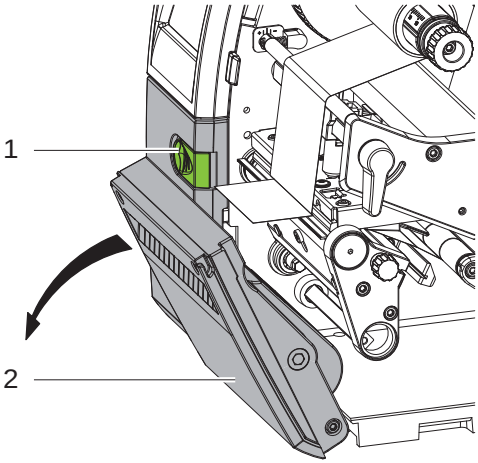
2.4 Mounting Cutter Tray



- ▶ Hook the cutter tray box (3) with the fixing brackets into the recesses (1) on the mounted cutter (2).
- ▶ Slide the divider (4) according to the label height into the corresponding groove in the cutter tray box. This ensures a correct stacking of the cut labels.

3.1 Preparation

▶ Slide lever (1) to the left to fold down the cutter unit (2).



▶ Insert labels for tear-off mode ▷ Instructions of the printer.
Place the media strip between the printhead and the drive roller, so that the front edge of the strip reaches through the cutter.

▶ Insert ribbon ▷ Instructions of the printer.

▶ Fold up and lock the cutter unit (2).

▶ Activate the cut mode in the software.
In direct programming use the "C" command.
▷ Programming Manual of the printer.

▶ Configure the cut parameters ▷ 4. Printer Configuration

Note!
The cut parameters are only accessible with cutter installed.

3.2 Standard Operation

▶ Switch on the printer.
The cutter performs a synchronization action.

Note!
To operate the cutter with continuous material in the printer menu *Setup* ➞ *Labels* ➞ *Label sensor* the setting *Continuous media* has to be selected. Otherwise no synchronization cut is carried out.

▶ Press  . For synchronization the media will be moved forward and cut off.
That synchronization is not necessary when the printhead was not opened between print jobs, even if the printer was powered off between print jobs.

▶ Send a print job.
All labels in the job will be printed without stopping and be cut as chosen in the software : after each label, after a specific quantity of labels, or at the end of a print job.

Note!
Between the print jobs a direct cut can be released by pressing  on the control panel.

Note!
In case the material do adhere in follow of electrostatic charge it's possible to mount an antistatic brush (Part No. 5977339) on the printer.

3.3 Cutting on Demand

In the "Cut on Demand" mode the print job will be split into steps, which can be released separately.

▶ Choose *Printing* > *Print on demand* = *On*.
▷ 4. Printer Configuration.

▶ Send a print job.

▶ Press  .
The first label will be printed and cut.

▶ Press  again to print and cut the next label.

Note!
The  function can be released alternatively by an external START signal when the I/O interface is installed on the printer.
▷ Configuration Manual of the printer.

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

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

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

For detailed instructions for configuration
▷ Configuration Manual of the printer.

Cut Parameters

- ▶ Start menu.
- ▶ Select  *Setup* >  *Cutting*.

Parameter	Meaning	Default
 *Device info*	Information to the device: Software version, counts of cuts and errors	
 *Calibrate device*	Calibration of the lower blade end position. ▷ „5.4 Calibrating the cutter“	
 *Cut position*	Offset of the cut position relative to the rear label edge. The setting can also be adjusted by the software. The settings of configuration and software are added together.	*0.0 mm*

Label Sensor

- ▶ Start menu.
- ▶ Select  *Setup* >  *Labels*.

Parameter	Meaning	Default
 *Label sensor*	Method for detecting the starting end of the label. *Gap Sensor*: Detection using changes in the transparency between the label and label gap. *Bottom-Reflect*: Detection using reflex marks on the bottom of the medium. *Continuous media*: Checking the existence of media only.	*Gap sensor*

Backfeed

- ▶ Start menu.
- ▶ Select  *Setup* >  *Printing.*

Parameter	Meaning	Default
 *Backfeed*	Method for backfeeding the label medium. Backfeeding is necessary in the cutting and peel-off modes since a label is pushed out passed the front edge of the next label above the print line when peeling off/cutting. *always*: Backfeeding occurs independently of label contents. *smart*: Backfeeding only occurs when the next label is not yet completely prepared when peeling off/ cutting the current label. Otherwise, the second label is pushed on and completed after removal of the first label without backfeeding.	*smart*

Print on demand

- ▶ Start menu.
- ▶ Select  *Setup* >  *Printing.*

Parameter	Meaning	Default
 *Print on demand*	Behavior between the cuts *On*: After cutting a label the next one will be printed and cut after touching  . *Off*: All labels will be printed and cut nonstop	*Off*

5.1 Removing the blades for cleaning and replacement

Warning!

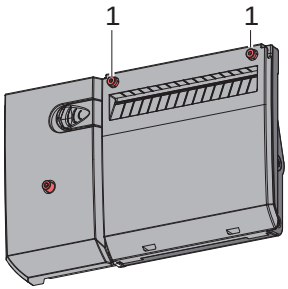
▶ **Disconnect the printer from the electrical outlet.**

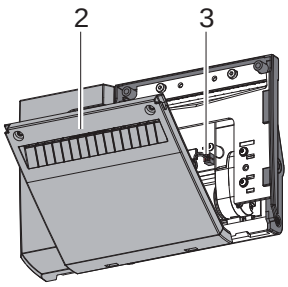
Caution!

Risk of injury. The cutter blades are sharp.

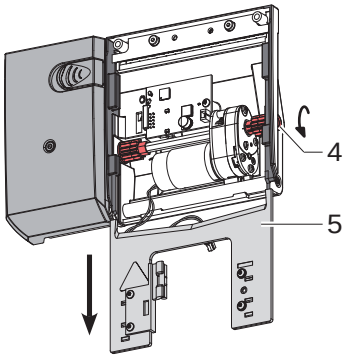
To clean the blades, they must be removed.

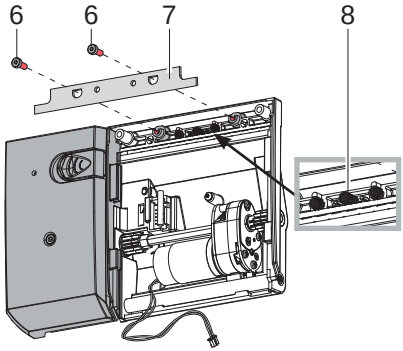
1. Disassemble the cutter from the printer.





2. Loosen screws (1) and remove cover (2) towards the front.
3. Pull the plug (3) of the motor cable out of the socket.





4. Using a 2.5mm hex wrench to turn the axle (4) counterclockwise. The lower blade (5) is moved down until it can be pulled out.
5. Loosen screws (6). Fix the upper blade (7) while the springs (8) press against the upper blade (7).
6. Remove the upper blade (7) and make sure that the springs (8) do not fall out.

5.2 Lubricating the blades

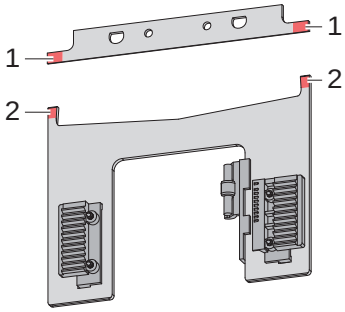
Note!
When cutting through the label material instead of the label gap remains of adhesive may accumulate on the blades. If operating in backfeed mode, such remains of adhesive may be deposited on the drive roller as well.

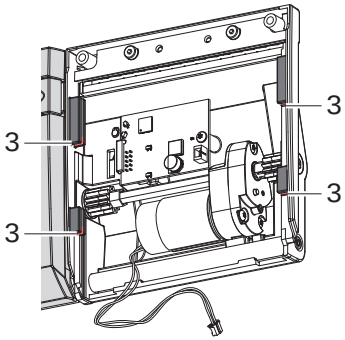
- ▶ **Clean often the drive roller (▷ Printer Instructions) and the cutter blades.**

For a perfect function of the cutter, it is necessary to grease the blades and guides at selected areas after each cleaning and before installing new blades.

- ▶ Lubricate the marked areas at the front side (1) of the upper blade and the rear side (2) of the lower blade as well as the guides (3).

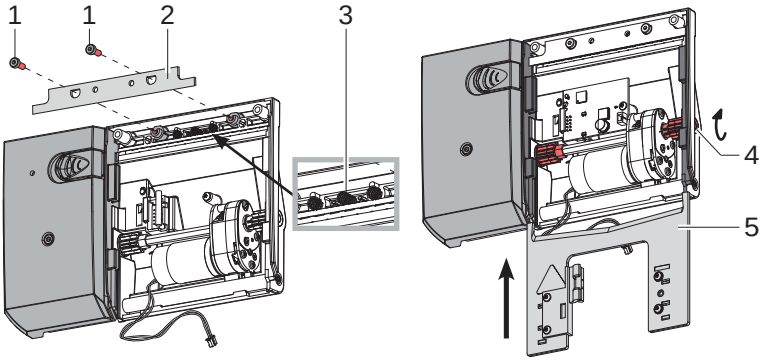
Attention!
Use only such a grease to lubricate the blades and the guiding surfaces which is suitable for metal and plastics.
cab Part No.: 5984552.001



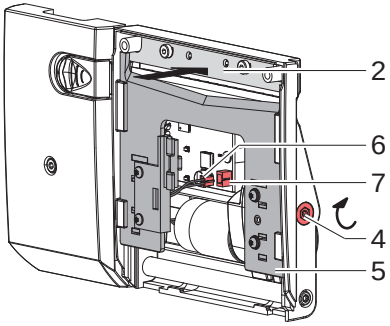


5.3 Reassembling the blades

The assembly of the cleaned or new blades and the assembly of the cutter is carried out in the reverse order of disassembly.



1. Put the upper blade (2) on to the holders and make sure that the springs (3) are not be bent and remain in the guides.
2. Fix the upper blade (2) with the screws (1).
3. Push the lower blade (5) in the guides upward until the toothed rail on the upper blade (5) pushes against the gear wheels on the axle (4).
   Then turn the axle (4) clockwise with a 2.5 mm hex wrench and move the lower blade (5) near to the upper blade (2).



4. Press the upper blade (2) inwards and slide the lower blade (5) over the upper blade (2) by turning the axle (4) clockwise to the top.
5. Insert the plug (6) of the motor cable into the socket (7).
6. Mount the cover and attach the cutter to the printer.

After turning on the printer, the lower blade position will be synchronized.

5.4 Calibrating the cutter

Attention!
After every blade change and removal and installation of the blades for cleaning, the blades must be calibrated!

- ▶ Remove label material.
- ▶ Start menu.
- ▶ Select  *Setup* >  *Cutting* >  *Calibrate device.*
- ▶ Press *Continue* to start the calibration process.
  After a cutter movement the display shows *Device successfully calibrated*.
  If the calibration failed an error message will appear.
- ▶ Select *Continue*.

Error message	Cause	Remedy
Cutter blocked	The media cannot be cut and the blades cannot return in the home position.	▶ Switch off the printer. ▶ Remove trapped material. ▶ Switch on the printer. ▶ New start of the print job. Change material.
	Cutter is without function.	▶ Switch off and on the printer. ▶ If it does occur again, contact service.
Cutter cover open	Cover of cutter is not mounted.	▶ Mount the cover
Device not locked	Cutter is not in operating position. Tear-off Plate not mounted	▶ Fold up and lock the cutter unit. ▶ Mount the Tear-off Plate
Device too hot	Temperature of the cutter is not in the allowed range.	▶ Let cool down the cutter.
Media too thick	The media cannot be cut but the blades can return in the home position.	▶ Press *Cancel* . ▶ Change material.

Warning message	Cause	Remedy
Blades dirty or worn out	Cleaning or blade-replacing necessary.	▶ Clean the blades. ▶ Change the blades.

Warning messages can be acknowledged with Next and the printing and cutting process will be continued.

7.1 Reference to the EU Declaration of Conformity

The cutters of the CSQ series 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=3599

7.2 FCC

NOTE : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user may be required to correct the interference at his own expense.