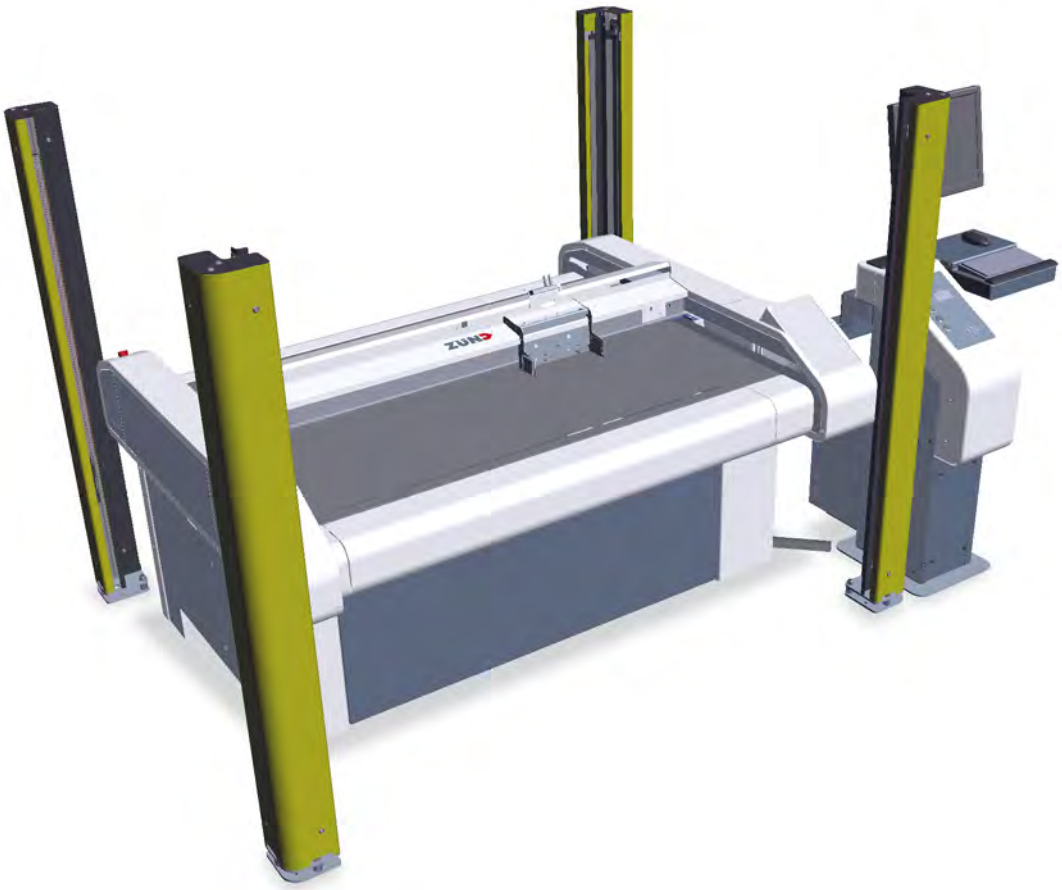
Mounting Instructions
S3 Optional Light Curtain



ZÜND
swiss cutting systems

Keep it in a safe place for future use!

Original operating manual

Software/Firmware version: FW 1.75
Creation date: 12-2021

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1 About these instructions

These instructions serve as the working basis for the specialist service technician. Carefully read through and follow the instructions. Ensure optimal and safe work with the product from the start. The most current version is found in the reseller area.

1.1 Scope

These instructions are valid for the following products:

- S3 cutter

1.2 Presentation conventions

The representation of the product may deviate from the original. In part, simplified representations or cross-sectional views are used for illustration. In some illustrations, other product variations are used as examples, insofar as there are no significant differences from the delivered product.

1.3 Legal notice

The information in this publication is intended for informational purposes only and is subject to change without notice. It does not constitute an obligation on the part of Zünd Systemtechnik AG. No part of this document may be copied, distributed, used or disclosed to third parties without express permission. Offenders will be liable for damages.

1.4 Other applicable documents

- Operating instructions
- Mounting Instructions

The most current version is found in the reseller area.

1.5 Service contact

Address	Zünd Systemtechnik AG Industriestrasse 8 9450 Altstätten Switzerland
Telephone	+41 71 554 81 00
E-mail	support@zund.com
Internet	http://reseller.zund.com/

2 Safety

2.1 Basic safety

General

- Read and observe the product operating instructions – particularly the chapter on safety.
- Read and observe all other applicable documentation.
- Use the product only as intended.
- Use the correct tool for each application.

Safeguarding against mechanical/physical hazards

- When adding heavy components, be aware of limbs – especially fingers – being trapped or crushed.
- Only operate transport equipment and lifting devices if you have been authorized to do so.
- Do not lift heavy loads alone.
- Do not use compressed air to clean the cutter or clothing.
- Hold the hand valve on the maintenance unit until all pneumatic hoses are connected.

Safeguarding against electrical hazards

- Use only insulated tools when working on electrical equipment.
- Use the appropriate tool for each application.
- Switch off the device at the main switch and secure against unauthorized restart.

Safeguarding against chemical hazards

- Apply lubrication only with the corresponding application device (e.g., brush, spray can, syringe, press, tube).
- Apply glue only with the corresponding application device (e.g., applicator gun, tube).
- Read and observe the safety data sheets for chemicals.

2.2 Personal protective equipment

When operating, cleaning, maintaining, or assembling the machine, wear only form-fitting clothing as well as personal protective equipment suited to the task at hand. The following protective equipment is required:

- Work clothing
- Protective goggles if there is a risk that chips, liquids or gases under pressure can injure the eyes
- Protective gloves if there is a danger of being burned or injured by pointed or sharp-edged objects
- Ear protection if the continuous sound pressure level exceeds 85 db(A).
- Safety shoes

Important:

You are personally responsible for:

- using the required personal protective equipment
- cleaning and maintaining the equipment on a regular basis
- promptly replacing damaged and unusable parts of protective equipment

2.3 Requirements for personnel and third parties

Only persons who can be expected to perform this work reliably are allowed to perform these tasks. Persons whose responsiveness is influenced, for example, by narcotics, alcohol, or drugs are not permitted to perform work.

Service engineer (expert)

The service engineer is an expert who has been trained and authorized by Zünd Systemtechnik AG to perform assembly, maintenance, and service.

On the basis of his or her professional training, knowledge and experience as well as knowledge of the relevant provisions, the service technician must be able to carry out the tasks assigned to him or her and to recognize and avoid possible dangers independently.

Operating personnel

The operating personnel instructed by the operator are specifically trained for the area of responsibility in which they work, and they are aware of the relevant instructions and regulations.

The operating personnel trained by the operator are also qualified to deal with the processed material and are capable of independently identifying potential dangers in connection with their work and avoiding hazards.

Trainees

Trainees can be prospective staff or service engineers. These personnel may only operate within the framework of their training and instructions and supervision of trained personnel (trainers).

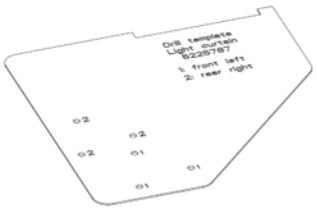
Third parties

Third parties and non-trained personnel may not operate the machine or parts of the machine.

3 Tools, operating and auxiliary materials

Tip:
A list of tools, operating and auxiliary materials is provided in the electronics spare parts catalog.

3.1 Tools

Image	Description	Task
	Standard toolbox	For general installation, service and maintenance work
	Precision spirit level Accuracy: 0.05 mm/m Art. no.: 3110907	To level the machine
	Test piece Included with delivery	Testing the light curtain
	Drilling templates Included with delivery	Marking the holes for the segment anchors
	Masonry drill Ø 8 mm and Ø 12 mm	Placing the segment anchors for the control panel/workstation and the pillars
	M4 thread cutting set with drill bit	Create threaded holes for the S-Box

3.2 Operating materials

Image	Description	Task
	Cutting oil	Lubricating the tap drill

4 Setting up

4.1 Overview

Cutter with optional light curtain	without material transport	with material transport
without CE	Yes	No
CE front	No	No
CE rear	No	No
CE front + CE rear	No	No

4.2 Turn off the cutter.

Switch off the cutter at the main switch and secure against unintentional restart.

5 Setting up the control panel/workstation

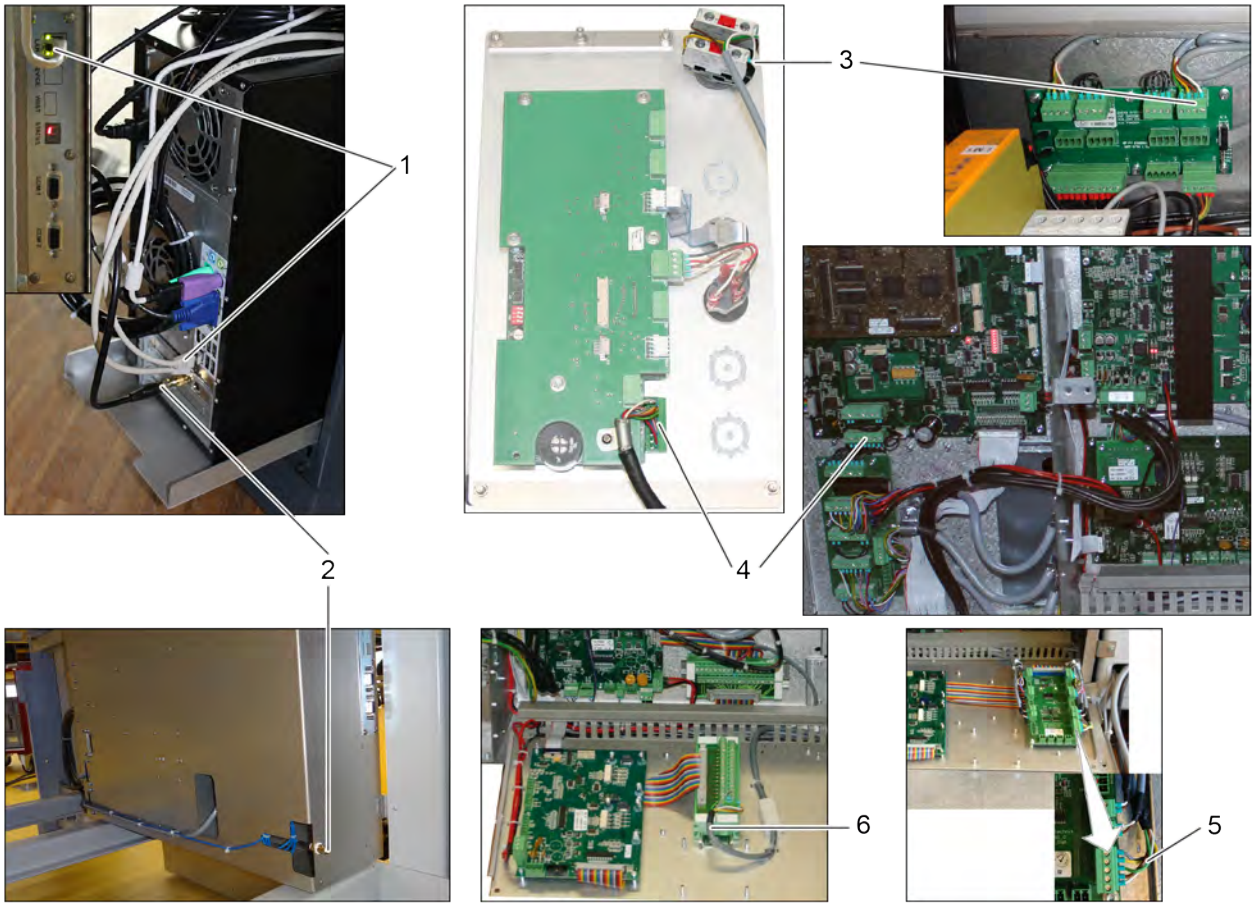
5.1 Dismantling the existing operating unit

The existing operating unit needs to be replaced with a free-standing control panel / workstation when using the light curtain.
The signal light is optional and must only be connected if it is present.

Control panel

Workstation

5.1.1 Unplugging the cables



1	LAN cable	4	Control unit cable (Electronics unit, BF-board S16)
2	Video signal cable (ICC camera, optional)	5	Signal light cable (ACS_IO_BOARD variant, optional)
3	Emergency stop control device cable (Power unit, EMM_CON_BOARD S5)	6	Signal light cable (Varioface 2 variant, optional)

A PC and cutter side support, right:

a) Unplug and remove the LAN cable.

b) Unplug and remove the video signal cable (ICC camera).

B Operating unit:

a) Unplug the Emergency stop control device cable.

b) Unplug the operating unit cable.

C Electronics unit:

a) Signal light (optional): pull out the stranded wires of the cable from the Varioface 2 or ACS_IO_BOARD and remove the cable.

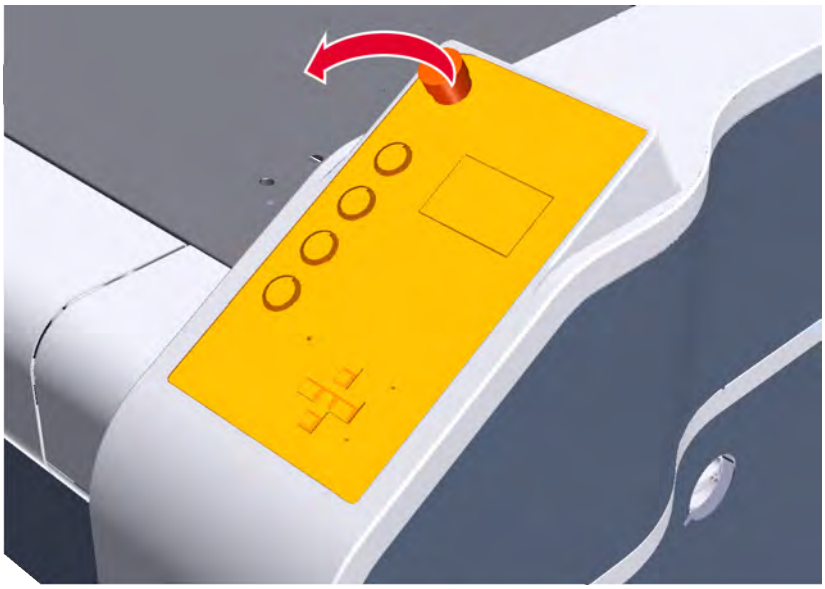
b) Unplug and remove the operating unit cable (ACS_BF_BOARD S16).

c) Unplug and remove the Emergency stop control device cable (ACS_EMM_CON_BOARD S5).

D Workstation:

a) Unplug the power supply (connector control) from the Workstation.

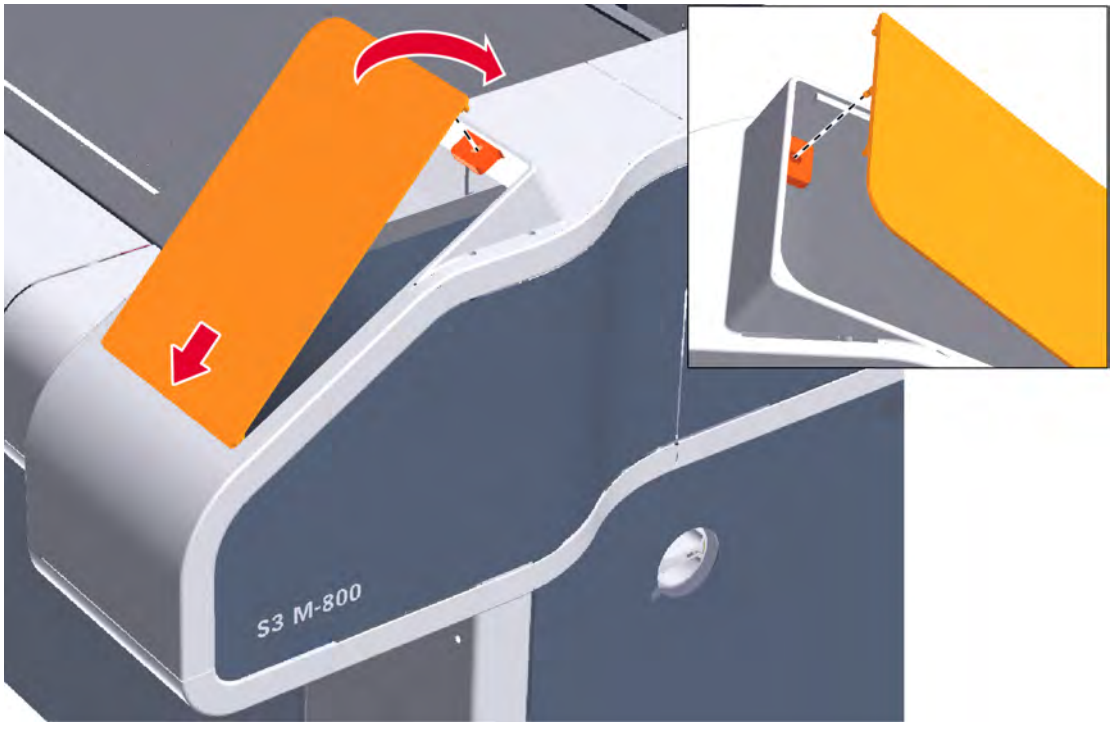
5.1.2 Removing the operating unit



A Carefully tilt the operating unit forward on the EMERGENCY STOP control device.

B Set the operating unit with the cables upright and pull it upwards out of the operating unit opening.

5.1.3 Mounting the dummy cover

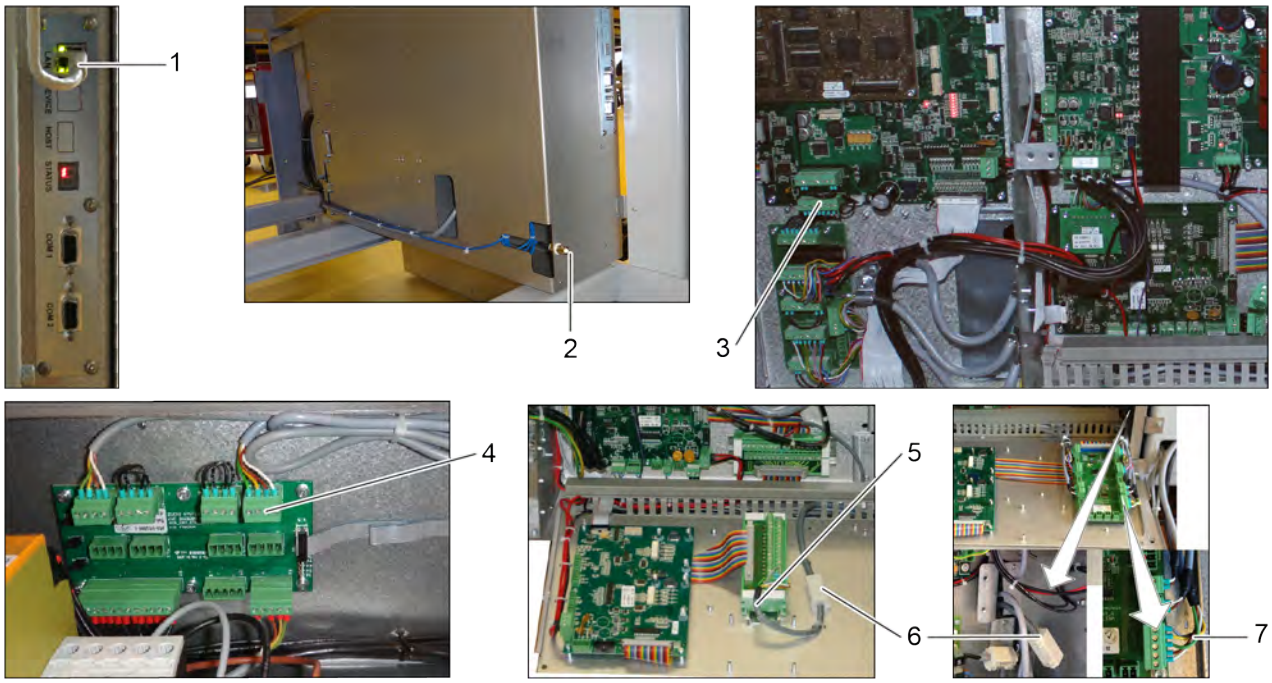


A Hook the dummy cover into the opening of the control panel at the bottom.

B Tilt the dummy cover backwards until the dummy cover snaps into place.

5.2 Connect cables to the cutter

The signal light is optional and must only be connected if it is present.



1	LAN cable	5	Signal light cable (electronics unit, Varioface_2 variant)
2	Video signal cable (ICC camera)	6	Ferrite
3	Operating unit cable (electronics unit, BF board S16)	7	Signal light cable (electronics unit, ACS_IO_BOARD variant)
4	EMERGENCY STOP control device cable (power unit, EMM_CON_BOARD S5)		

A Plug in the new, longer LAN cable.

B Plug in the new, longer video signal cable.

C Mount the earthing cable in the electronics unit.

D Plug the new, longer operating unit cable into the ACS_BF_BOARD S16.

E Connect the extension cable of the signal lights to Varioface 2 or ACS_IO_BOARD. Mount the ferrite.

a) Connect to Varioface 2:

Varioface 2 clamp	Cord
1	white
3	brown
4	green
5	yellow
6	gray

b) Connect to ACS_IO_BOARD:

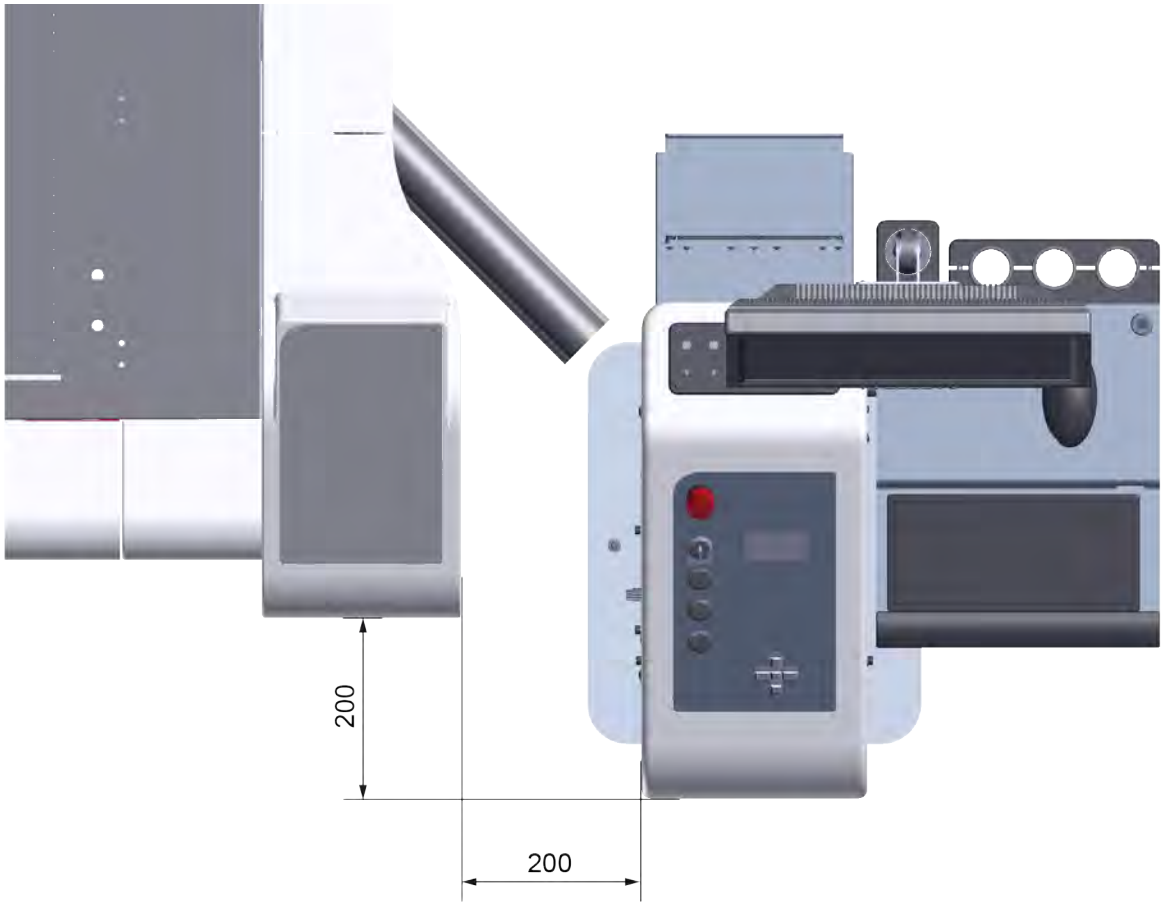
ACS_IO_BOARD clamp No.	Cord
1	white
2	brown
3	green
4	yellow
5	gray

F Plug the EMERGENCY STOP control device cable into EMM_CON_BOARD S5.

G Lay the cables next to the electronics unit and combine them into a strand.

H Lay the cable strand to the control panel/workstation.

5.3 Positioning the control panel / workstation



A Position the control panel / the workstation at a distance of 200 mm from the side support.

B Allow the control panel/workstation to protrude 200 mm at the front from the side support.

5.4 Assembly with segment anchors (fastening to the floor)

Note:
Damage to lines or underfloor heating possible.
- Check for any lines in the floor or underfloor heating before drilling the holes.

Caution:
Crushing risk!
- Set up the workstation / control panel at least 200 mm from the side support of the cutter.

Caution:
Risk of injury from the workstation tipping over
The workstation can tip over if weight is applied to the surface area.
- Avoid putting weight on the workstation before anchoring to the floor.

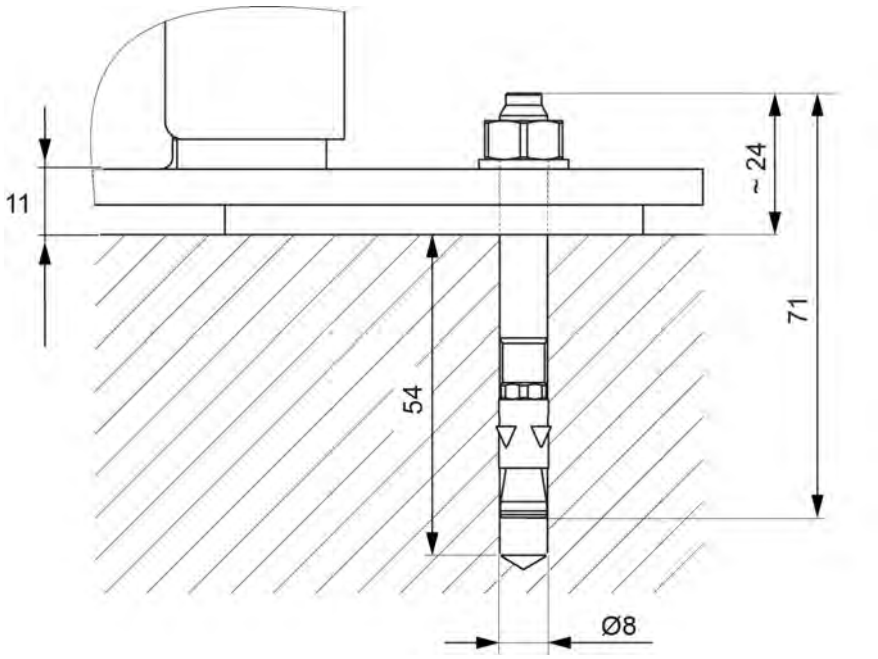
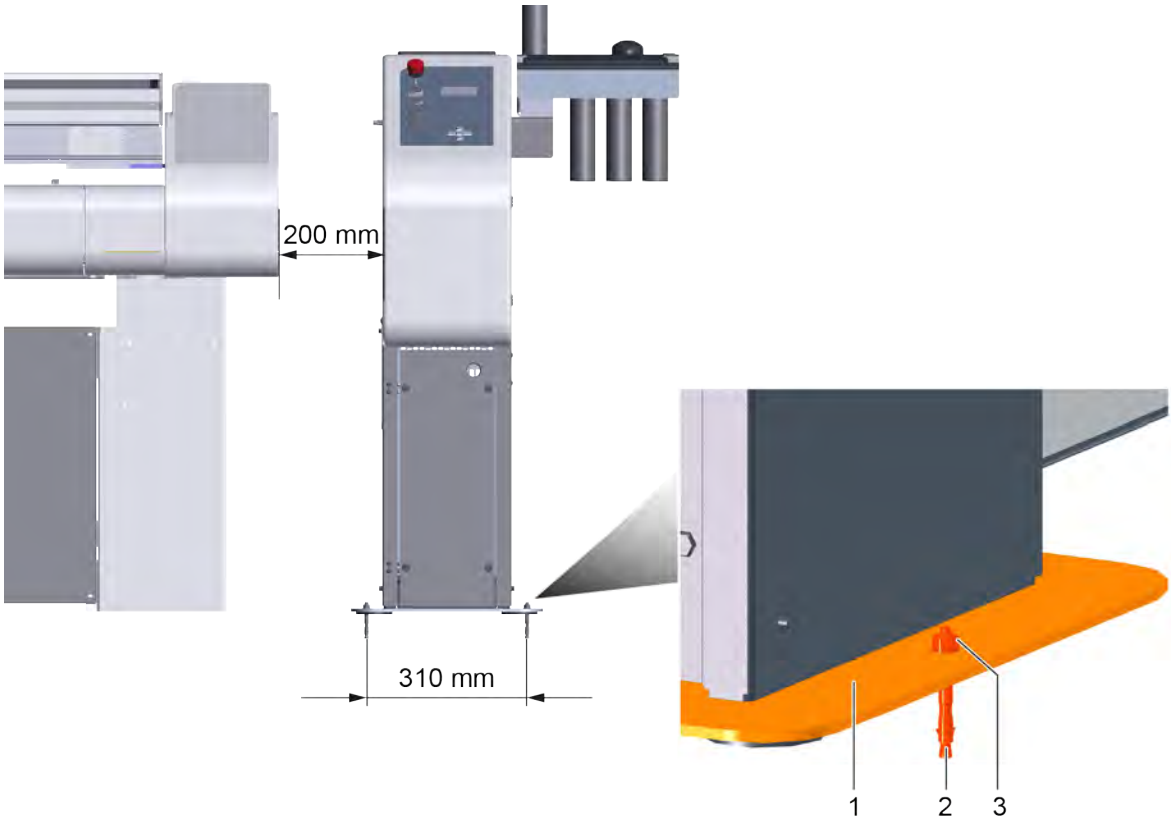


Figure 1: Dimensions of the M8 segment anchor

Segment anchors used	pcs.
M8 segment anchor (stud anchor FBN II M8/10 (8x71))	2

The minimum depth of the drill hole is 54 mm.
After driving in the segment anchor, there should be an overhang of approx. 20 mm.



1	Control panel / workstation base plate	3	Washers and nuts (2x)
2	M8 segment anchor (2x)		

A Define the position of the control panel / workstation.

B Draw both holes for the segment anchors and drill them.

a) The distance of the control panel / workstation to the side support is 200 mm.

b) The distance between the holes is 310 mm.

c) Ø 8 mm, drilling depth min. 54 mm.

C Remove drilling dust from the holes.

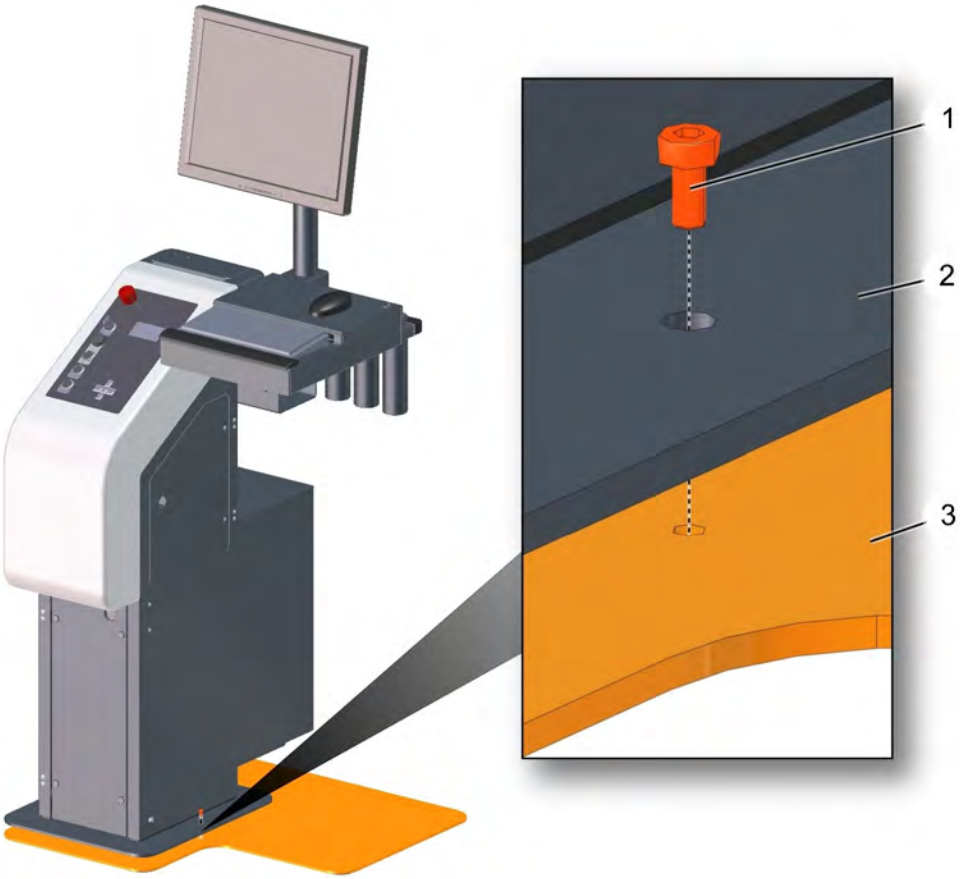
D Place the segment anchor and drive it in until it protrudes approx. 20 mm.

E Place the control panel/workstation onto both segment anchors.

F Place the washers and nuts and tighten the nuts.

5.5 Installation with auxiliary bracket

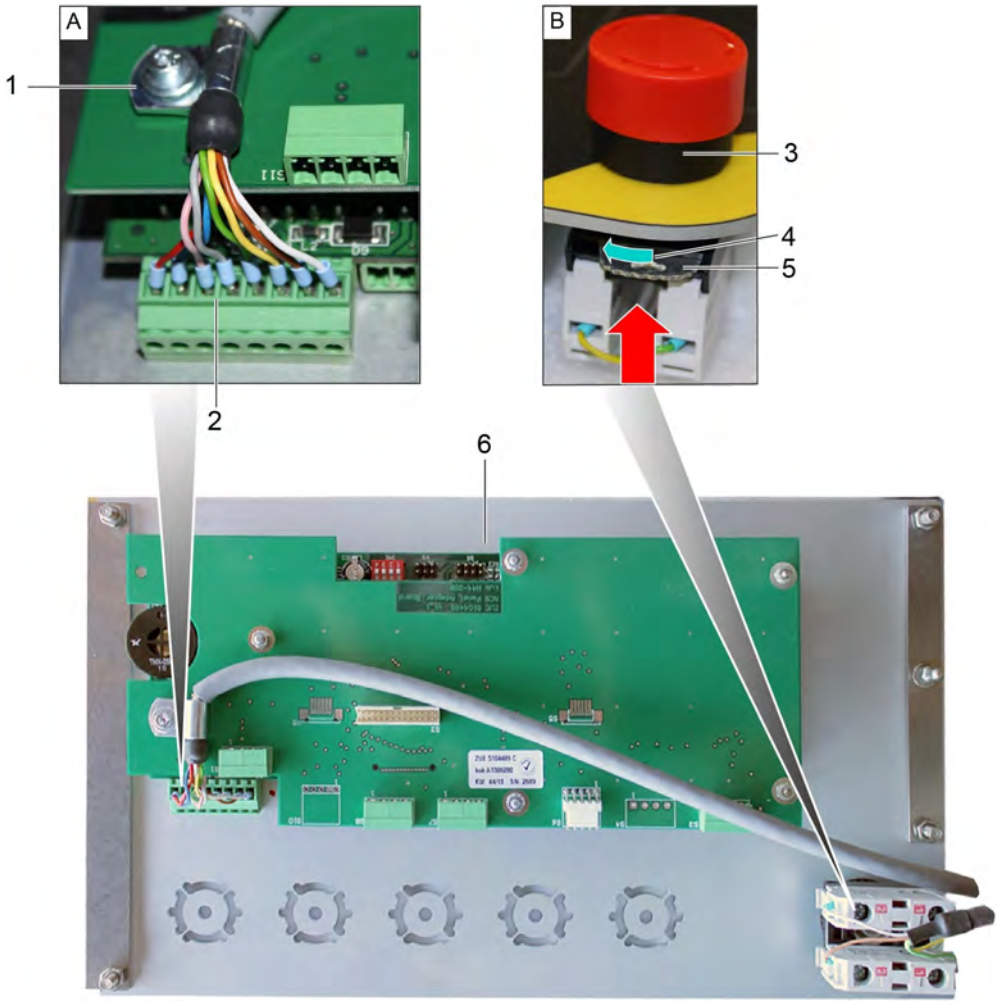
Caution:
Risk of injury from the workstation tipping over
The workstation can tip over if weight is applied to the surface area.
- Avoid putting weight on the workstation before fixing it to the auxiliary bracket.



1 Screw (2x)
2 Base plate
3 Auxiliary bracket

A Place the control panel/workstation on the auxiliary bracket and align.
B Place the screws and tighten.

5.6 Connecting the cable to the operating unit



1	Shield terminal	4	Direction of rotation
2	Plug connector	5	Locking device
3	EMERGENCY STOP control device	6	View of operating unit from below

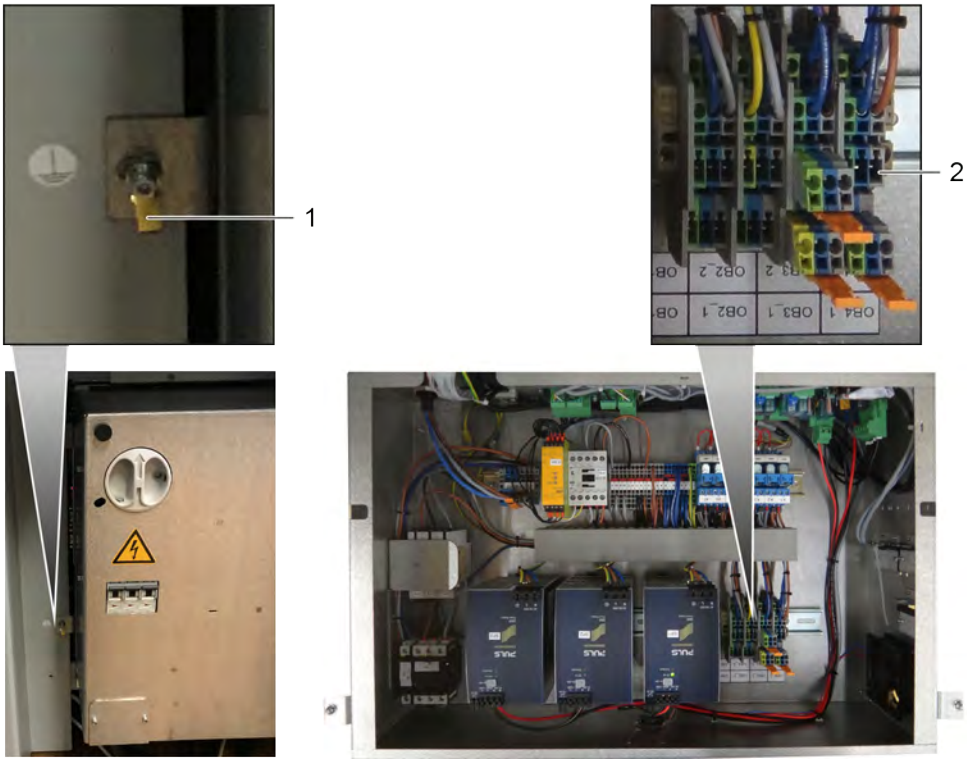
A Plug in the plug connector of the operating unit and fix the shielding bracket.

B Connect the switching element to the EMERGENCY STOP control device and close the locking device.

C Carefully insert the operating unit into the control panel/workstation.

5.7 Connecting the earthing and power supply for the control panel/ workstation

Tip:
The connector control is only available at the workstation.



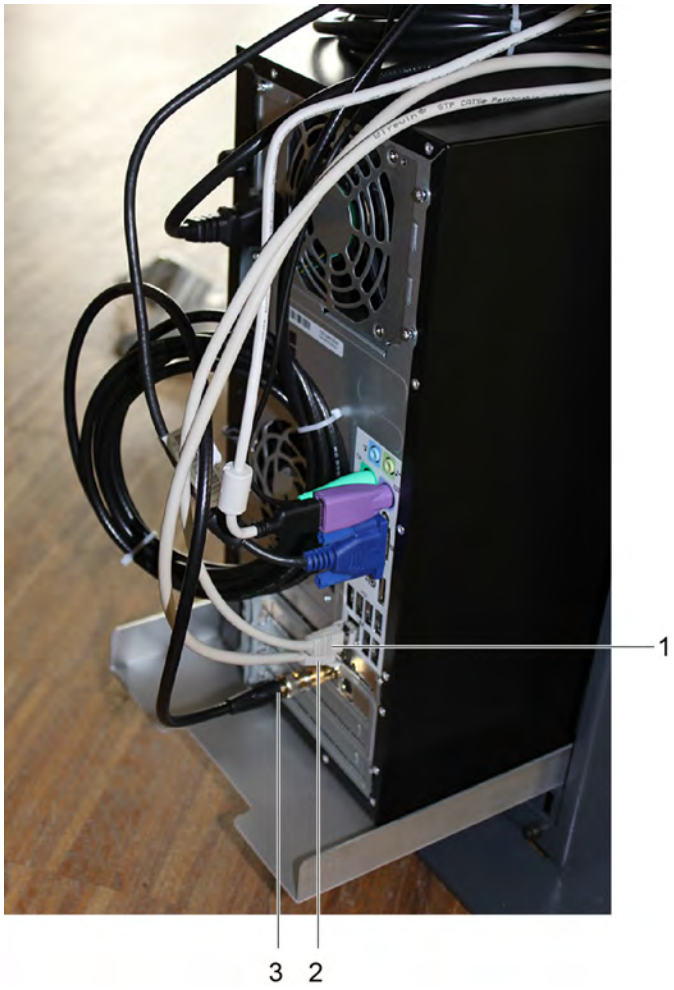
1 Workstation earthing

2 Workstation OB4_2 power supply

A Lay the control panel/workstation earthing cable to the left side of the power unit.
B Place the blade receptacle from the earthing cable onto the plain connector.
C Lay the workstation supply cable from the connector control to the power unit.
D Feed the supply cables through the cable duct of the power unit.
E Plug the plug connector into OB4_2

5.8 Connect the PC connections

Tip:
The PC is only available at the workstation.

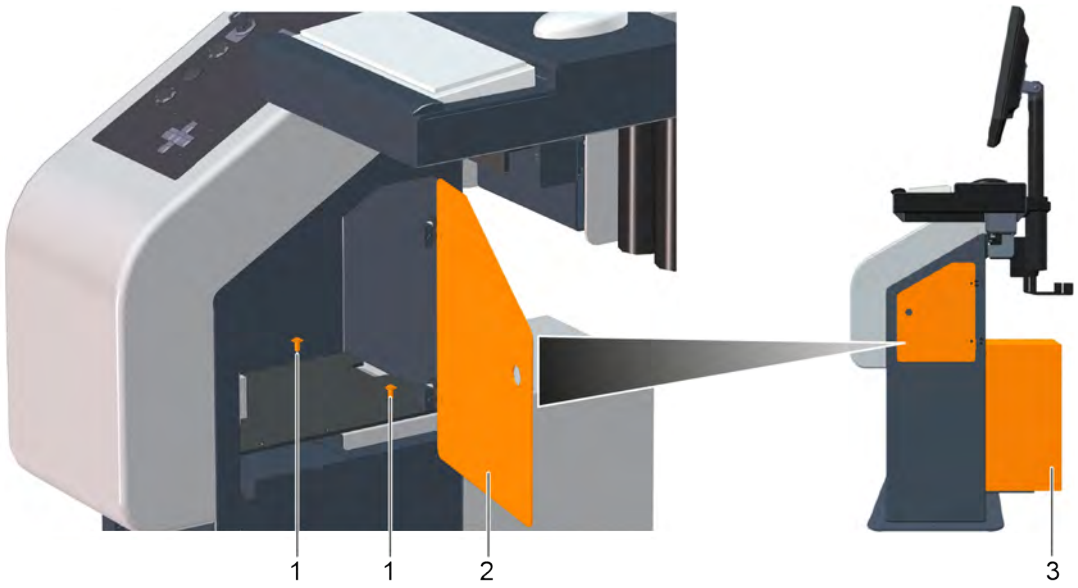


1	Cable of the internal LAN interface (company network)
2	Cable of the cutter interface
3	Video signal cable of the ICC camera

A Connect the cable of the internal LAN interface (1).
B Connect the cable of the cutter interface (2).
C Connect the video signal cable of the ICC camera (3).

5.9 Mounting the PC cover

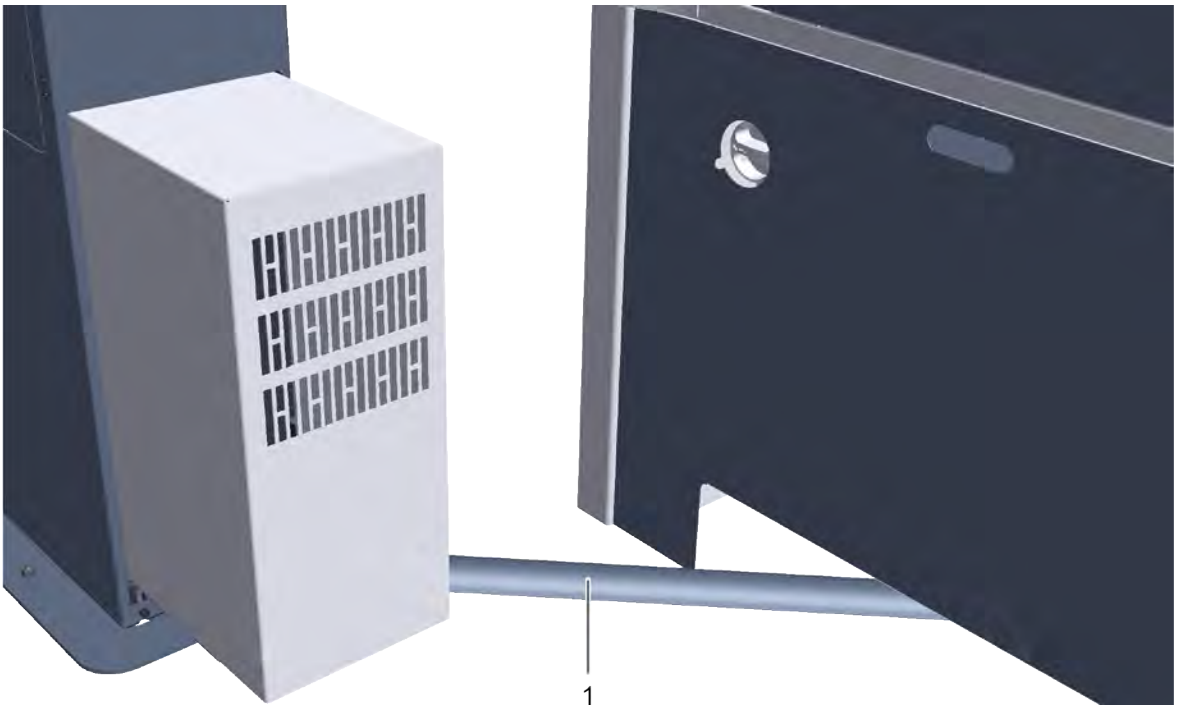
Tip:
Only the workstation has a PC cover.



1	Screws	3	PC cover
2	Door of the workstation		

A Push the PC cover into the workstation.
B Lift the PC cover and fix with the screws.
C Close the side door of the workstation.

5.10 Mount the cable bridge



1 Cable bridge

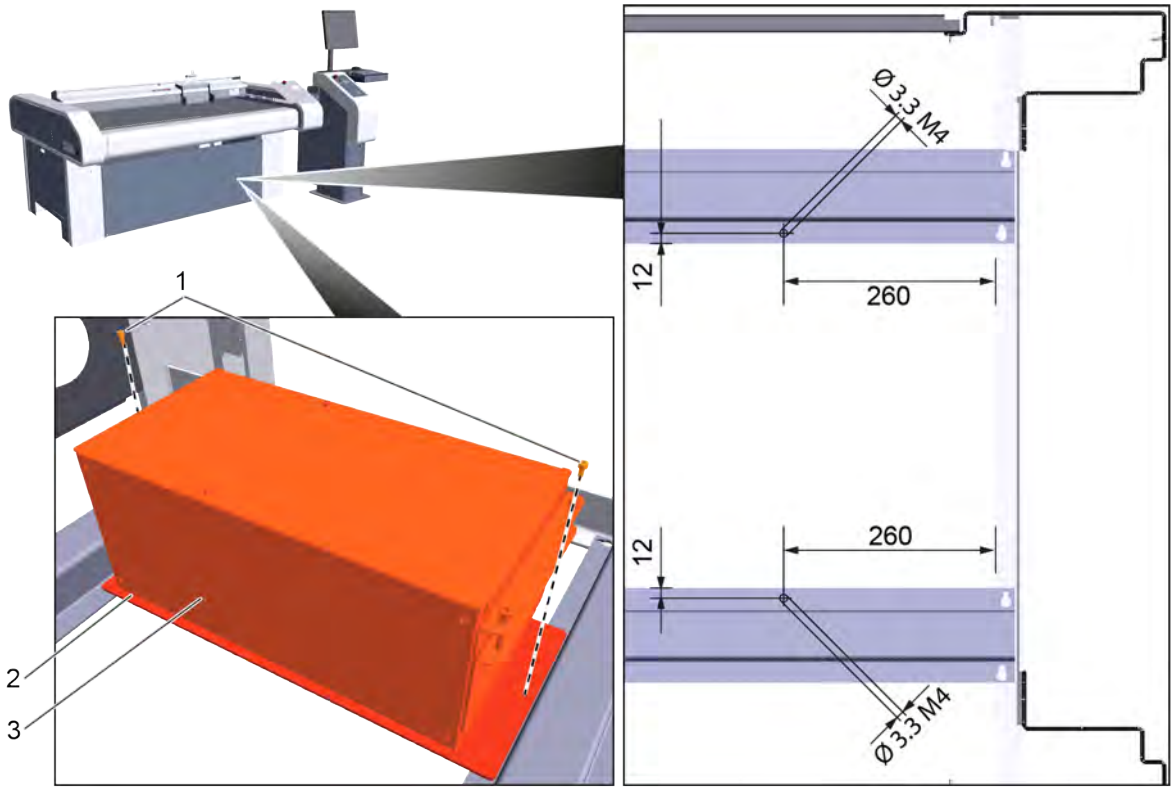
A Attach the self-adhesive cable bridge to the floor.
B Open the cable bridge and place the cables inside.
C Close the cable bridge.

6 Installing the S-box

6.1 Installing the S-box

The S-box (safety box) contains the safety relais and the connecting terminals of the cables for the light barrier transmitter/receiver.

Assembly takes place on the cross braces below the cutter.



1	Socket head screw M4x8	3	S-box
2	Base plate		

A Mark the drill holes for the S-box on the cross braces.
- a) Measure 260 mm from the inner edge of the right fixing bracket.
- b) Measure 12 mm from the edge of the cross brace.

B Drill the holes (Ø 3.3 mm).

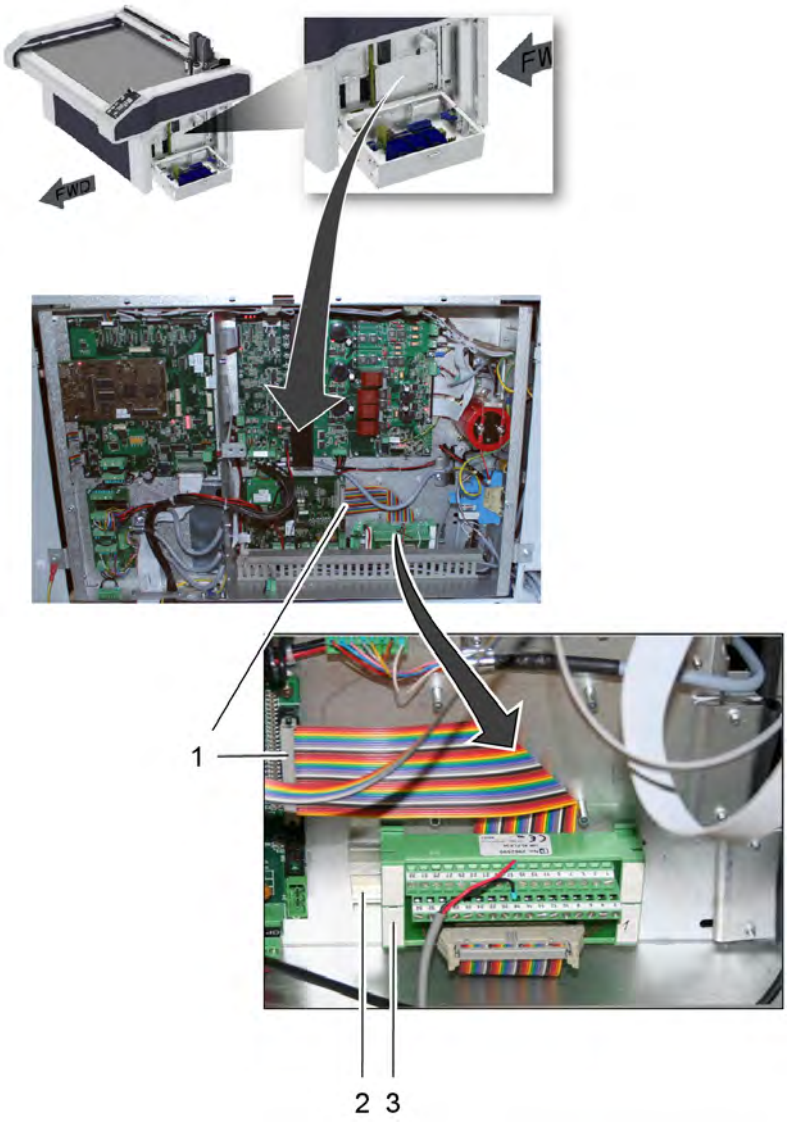
C Cut the M4 threads.

D Vacuum the drill chips with a vacuum cleaner and carefully clean the area.

E Position the S-box with the base plate on the cross braces.

F Tighten the base plate with 2 Socket head screws (M4x8).

6.2 Installing the Varioface module on the S3 cutter



1 Plug S7 (ACS_OPT_BRD1)

2 DIN rail

3 Varioface module

A Open the electronics unit.

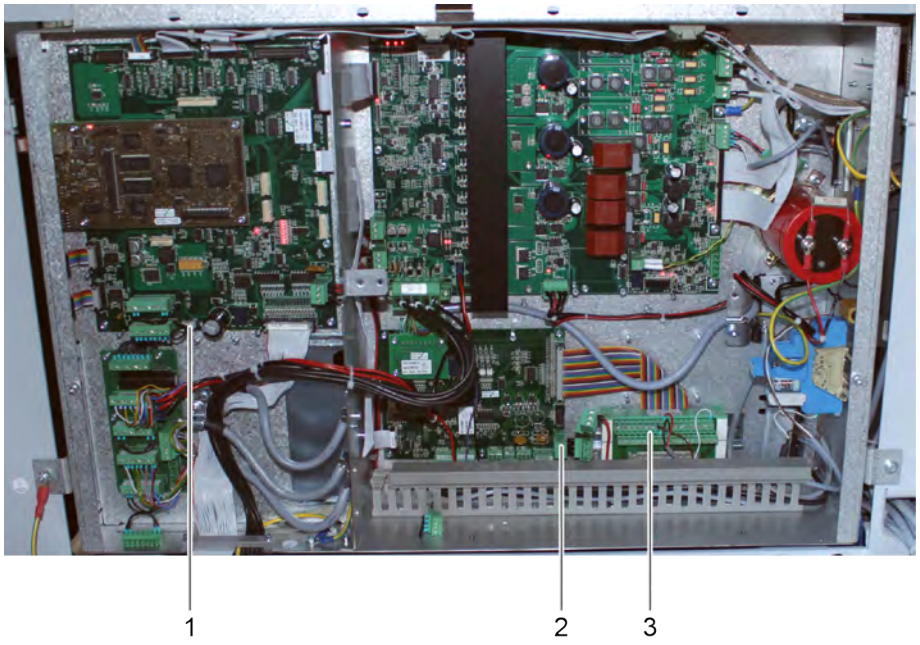
B Fasten the DIN rail with the M4 nuts and washers provided.

C Snap the Varioface module onto the DIN rail.

D Install and plug in the S7 Varioface module connection cable.

6.3 Connect S-box

Tip:
Older ACS_BF_BOARDs do not have an S20 slot. In this case, the ACS_BF_BOARD must be replaced with one of version 1.5 or higher.



1	S20 on ACS_BF_BOARD	3	Terminals 16 and 18 on the Varioface module
2	S4 on ACS_OPT_BRD1		

A Open the electronics unit.
B Guide the cable of the S-box into the electronics unit from behind through the opening.
C Activities on the ACS_BF_BOARD:
a) Remove the S20 bridge plug.
b) Plug the white plug connector into slot S20.
D Activities on the ACS_OPT_BRD1 (either on option board 1 or 2):
a) Option board 1: Plug the green plug connector into slot S4. Use a Y-piece, if required.
b) Option board 2: Plug the green plug connector into slot S4. Use a Y-piece, if required.
E Activities on the Varioface module:
a) Connect the white cord to terminal 16.
b) Connect the brown cord to terminal 18.
F Lay the cables properly and secure them with cable ties, if required.
G Close the electronics unit.

7 Mounting the light curtain

7.1 Marking holes for segment anchors

Caution:

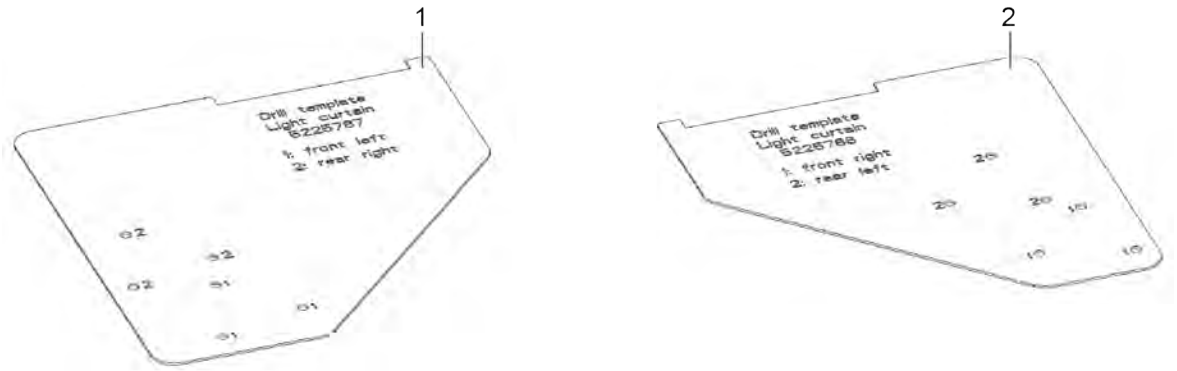
Incorrect set-up of the pillars can lead to accidents

The distances of the pillars to the cutter must absolutely be observed.

- Ensure the positions of the drill holes by correctly placing the templates at the feet.
- Check the positions of the marked drill holes using the reference dimension (see *Diagrams* on page 57).

Drilling templates are included in the scope of delivery. These are used to mark the drill holes on the base of the cutter.

The labeling indicates the side to which the drilling template applies.



	Drilling template	Drill holes
1	5225786	front right(1) and rear left (2)
2	5225787	front left (1) and rear right (2)

A Place the two drilling templates according to the labeling on the bases on one side of the cutter. For example, front left and rear left.

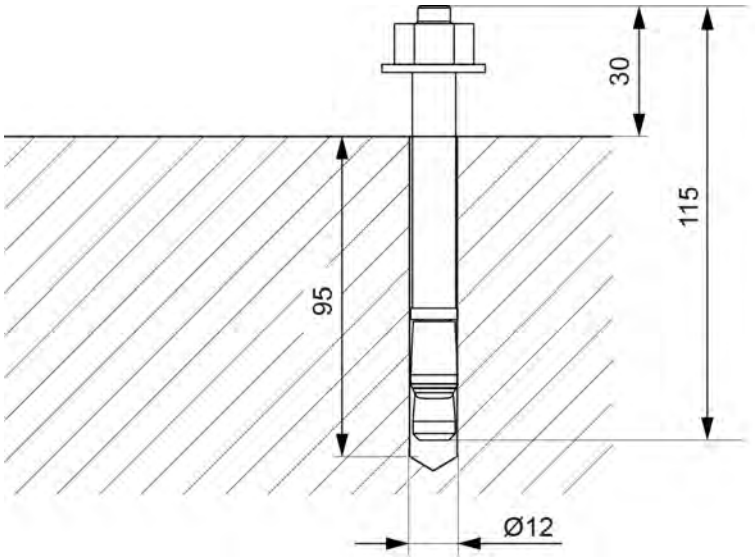
B Align the drilling templates to the base frame.

C Use the "reference dimension" assembly base to check the indicated dimension (see *Diagrams* on page 57).

D Mark the drill holes. Make sure to use the holes with the appropriate marking (1 = front, 2 = rear).

E Mark the drill holes on the opposite side in the same way.

7.2 Drilling holes and placing segment anchors



Segment anchors used	pcs.
M12 segment anchor (HST anchoring bolt M12 x 115/20)	12

Note:

If the segment anchor protrudes too far after placing, there will be a space issue when assembling the pillars.

- The minimum depth of the drill hole is 95 mm.
- After driving in the segment anchor, there should be a maximum overhang of approx. 30 mm.

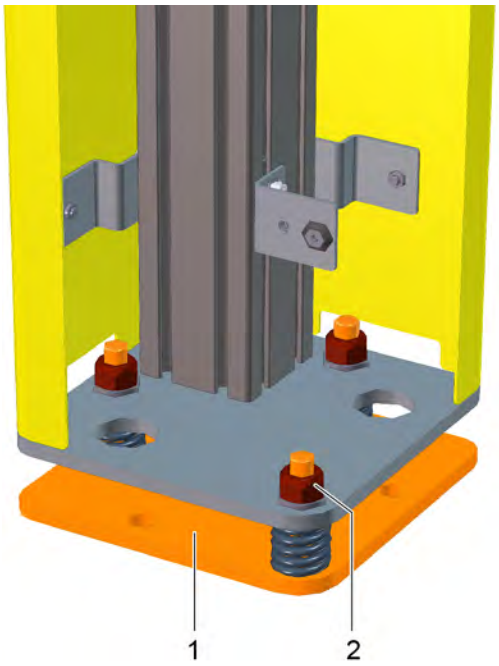
A Drill the holes at the marked points.

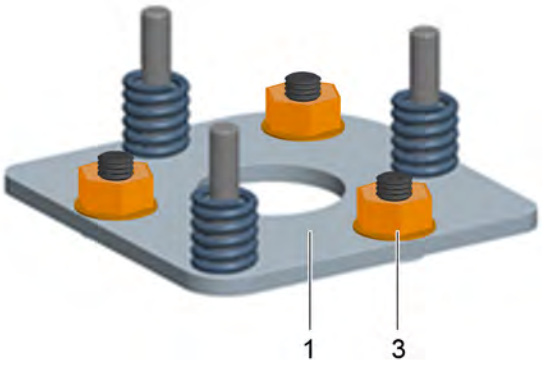
B Remove the drilling dust from the holes.

C Drive in the segment anchor to the required depth.

D Remove the nuts and washers and put them aside.

7.3 Mounting the base plates on the segment anchors





1 Base plate

2 Pillar nut

3 Nut and washer of the segment anchor

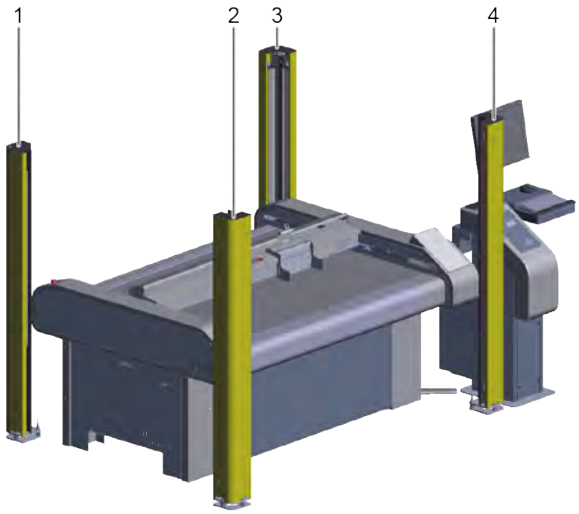
Note:
Alignment of the base plate:
- The corner with the large radius must always point outwards.

Shimming of the base plate:
- Washers can be placed beneath the base plate if the floor is not level.

A Loosen the nuts of the pillar and remove with the washers (3x).
B Remove the base plate and put the pillar aside.
C Place the base plate onto the segment anchors.
D Place the washers and nuts onto the segment anchors and tighten the nuts (3x).
E Repeat the process on the other corners.

7.4 Mounting the pillars

Note:
The pillars are labeled. For installation, make sure the specified space is maintained.
Examples of the labeling:

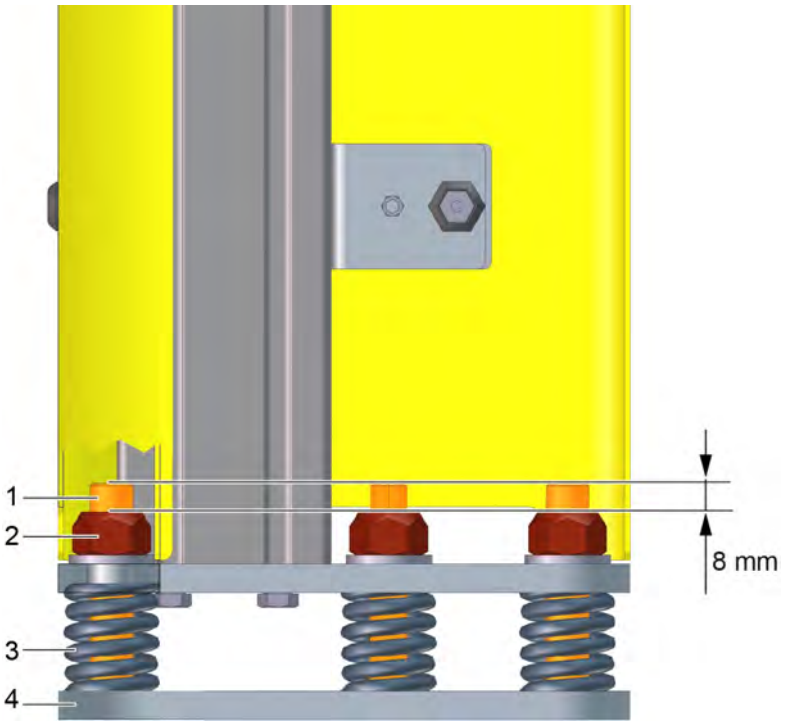


1	rear / left (transmitter/receiver)	3	rear / right (mirror)
2	front / left (mirror)	4	front / right (transmitter/receiver)

Note:

Observe prescribed tightening of the nuts.

- The thread must overhang at least 8 mm.
- The springs may not be completely compressed.



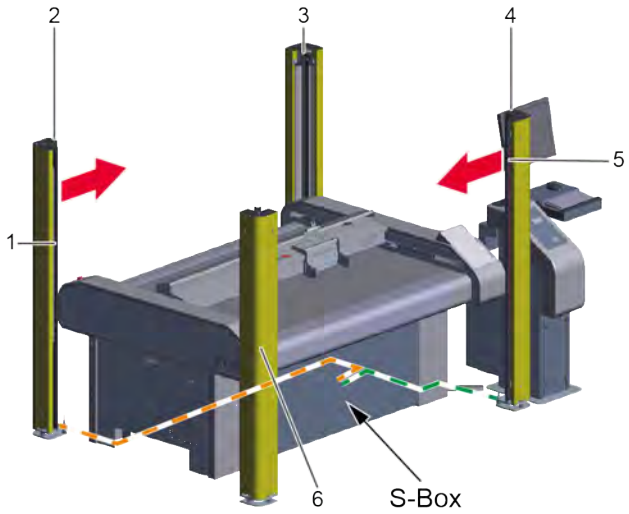
1	Screw	3	Spring
2	Nut	4	Base plate

A DPosition the pillar according to the labeling and place onto the screws of the base plate.
B Place the washers and nuts (3x).
C Tighten the nuts until at least 8 mm of the thread protrudes (3x).
D Remove the adhesive label (labeling) from the top of the pillar.
E Repeat the process on the other corners.

7.5 Connecting the light barrier transmitter and receiver

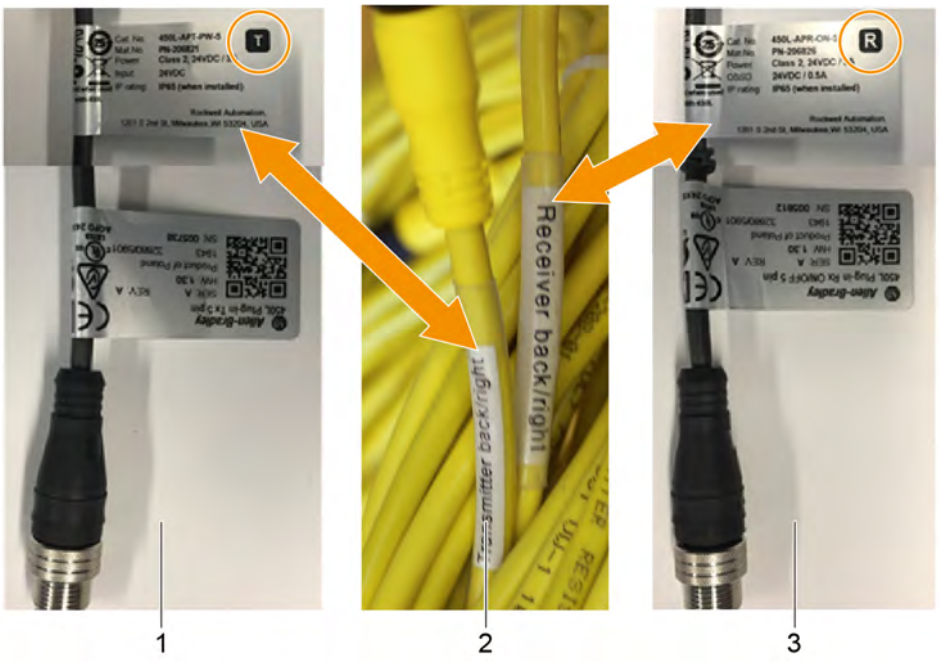
Notes on installing the cables:

- The cables to the light barrier transmitters and receivers must be installed on-site.
- The cables are labeled.
- The cables are routed from the S-box below the cutter along the cross braces to the pillars.



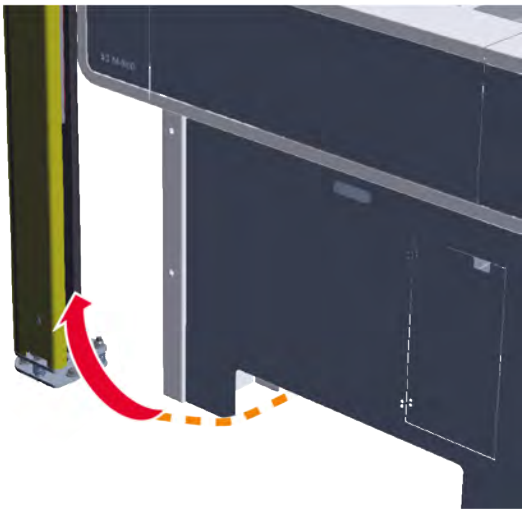
	Pillar	Device
1	rear / left	Receiver
2	rear / left	Light barrier transmitter
3	rear / right	Mirror
4	front / right	Receiver
5	front / right	Light barrier transmitter
6	front / left	Mirror

7.6 Laying and connecting cables



1	Transmitter connection cable (T)	3	Receiver connection cable (R)

2 Cable from the S-box



A Lay the cables along the braces below the cutter and secure them with cable ties.

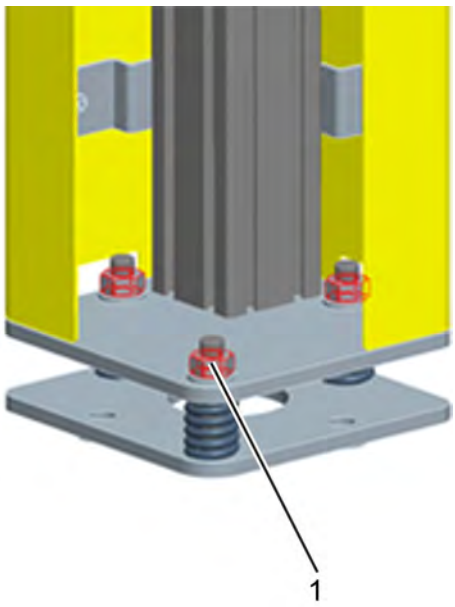
B Pass the cables out the side covers of the cutter.

C Connect the cables to the light barrier transmitters and receivers according to the labeling and secure them.

D Roll up extra cable and neatly store.

8 Setting up the light curtain

8.1 Aligning the pillars vertically



1 Nut (3 x)

Note:
Observe prescribed tightening of the nuts.
- The thread must overhang at least 8 mm.
- The springs may not be completely compressed.

A Use the spirit level on two sides to check whether the pillar is vertical.
B Loosen or tighten the corresponding nuts until the pillar is vertical.
C Repeat the process on the other corners.

8.2 Aligning the light curtain

The light curtain is equipped with an integrated laser alignment system (ILAS). The lasers used belong to laser class 2 and transmit a low intensity visible light. The control panels are located at the bottom next to the light barrier transmitters and at the top next to the receivers.

Please see the manufacturer's documentation for more information.

The light beam of the laser can deviate from the center point of the target, even when the pillars of the light curtain are optimally aligned. The deviation depends on the distance between the light barrier transmitter and receiver.

Caution:

Class 2 laser

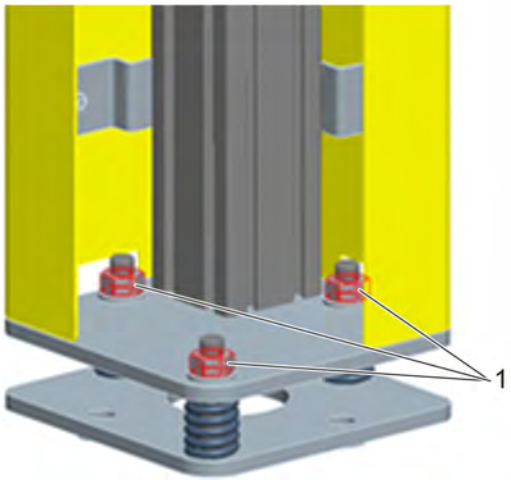
Possible eye damage

- Do not look into the laser beam.
- Switch off the laser alignment system when not in use.

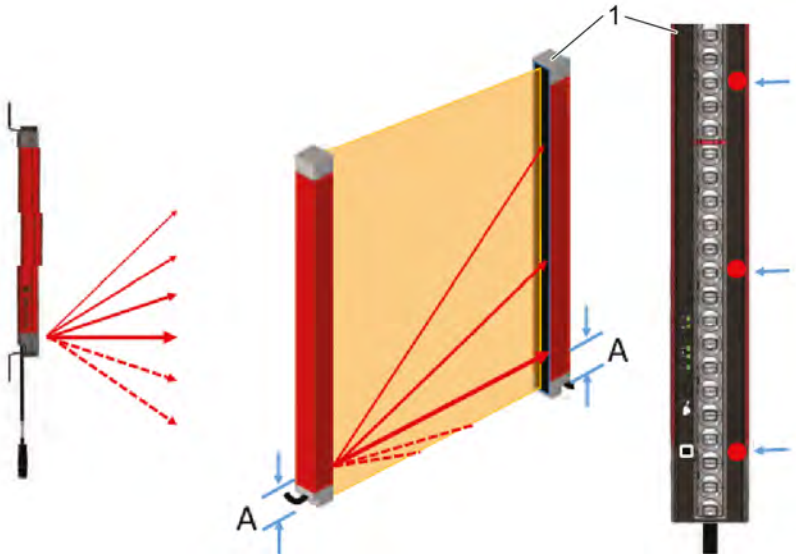
Aligning the light grid

A On the transmitter, press the optical key next to the status indicator.

A laser grid with 6 laser beams is emitted from the transmitter.

B Turn the M12 nuts (1) over the springs of the pillar to adjust the inclination of the pillar. The inclination of the light grid pillar or the mirror can be adjusted. 

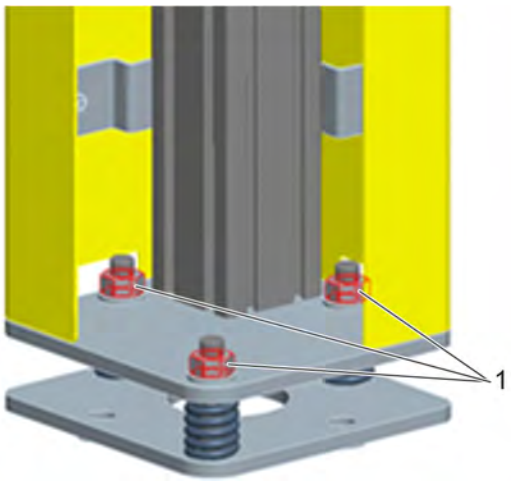
C Adjust the inclination until the laser points on the receiver (1) point to the black surface as shown. The distance (A) between the laser output (square on the transmitter) and the laser point (laser symbol on the receiver) opposite the housing must be the same.



D On the receiver, press the optical key next to the status indicator.

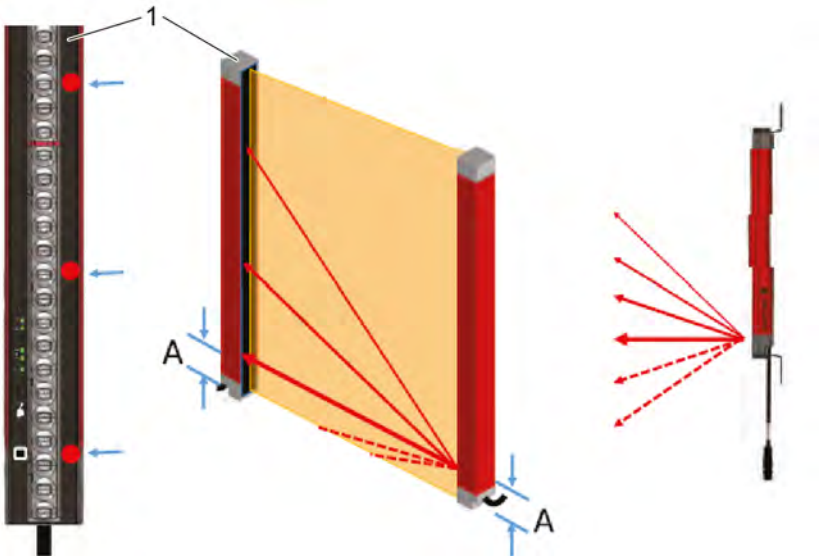
A laser grid with 6 laser beams is emitted from the receiver.

E Turn the M12 nuts (1) over the springs of the pillar to adjust the inclination of the pillar. The inclination of the light grid pillar or the mirror can be adjusted.



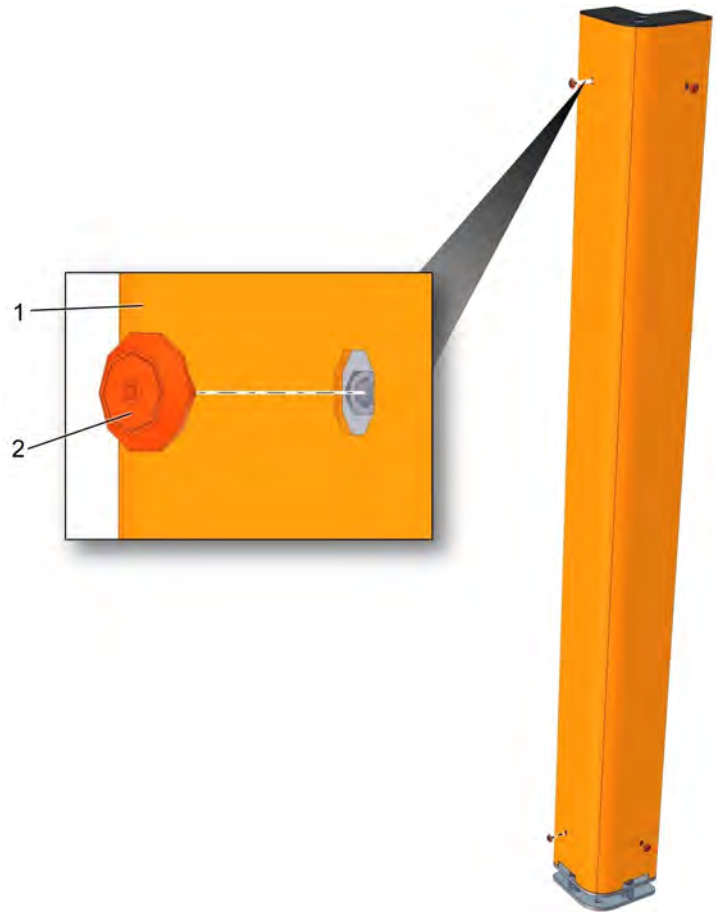
F Adjust the inclination until the laser points on the transmitter (1) point to the black surface as shown. The distance (A) between the laser output (square on the receiver)

and the laser point (laser symbol on the receiver) opposite the housing must be the same.



8.2.1 Removing the external covers

Tip:
On some pillars, the clamping screws for adjusting the light barrier transmitter/receiver are located behind the inner cover.



1 Cover

2 Screw with washer

A Remove the screws from the cover (4x).
B Remove the external cover of the pillar.
C Put the cover aside.
D Repeat the process on the other corners.

8.2.2 Switching on the integrated laser alignment system (ILAS)

Note:
The laser alignment system automatically switches itself off after five minutes.

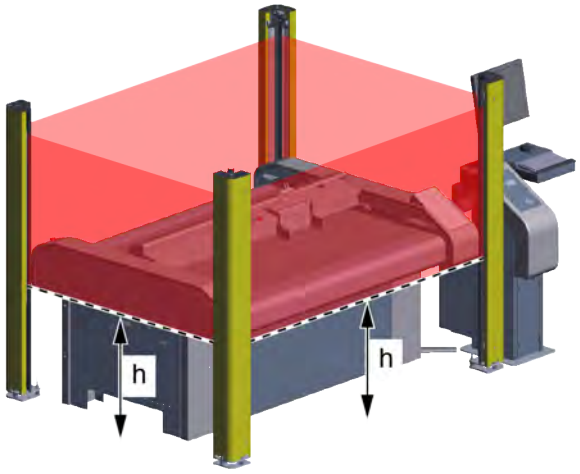
Caution:
Class 2 laser
Possible eye damage.
- Do not look into the laser beam.
- Switch off the laser alignment system when not in use.

A Approach the laser alignment system control panel (on the receiver at the top, on the light barrier transmitter at the bottom).

B Briefly place your finger or hand on the finger symbol.

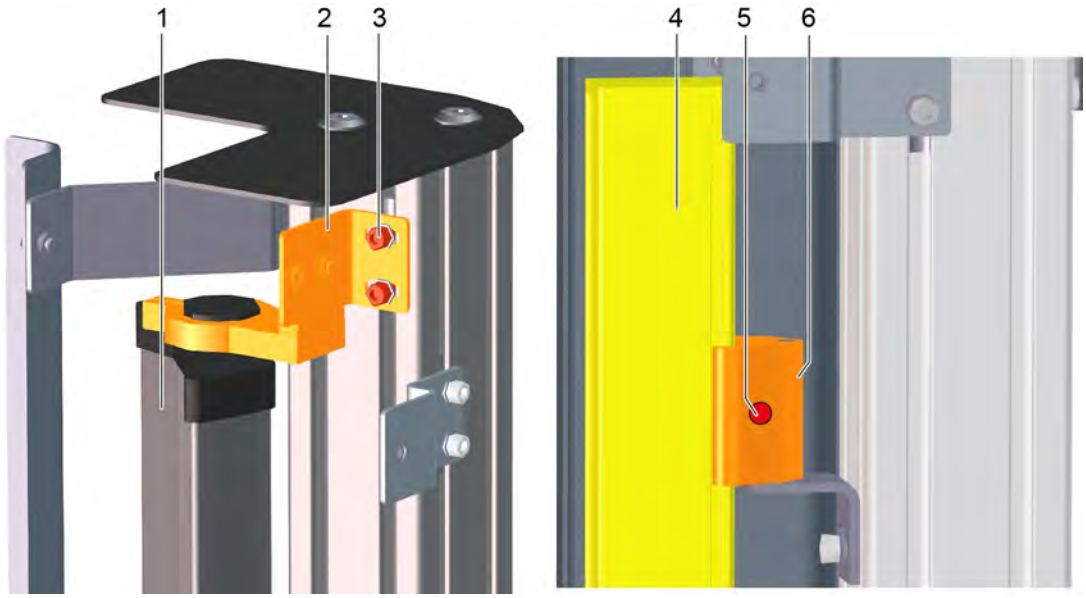
Results
The laser alignment system of the pillar pair will switch to a highly visible flashing light.

8.2.3 Adjusting the height of the light curtain



1	Rear light curtain	4	Left light curtain
2	Right light curtain	h	Height from floor to bottom light beam
3	Front light curtain		

Height of the bottom light beam	
h [mm]	min. 640 max. 680



1	Mirror	4	Light barrier transmitter/receiver
2	Holder	5	Clamping screw
3	Screw	6	Retaining bracket

A Slightly loosen the clamping screws of the retaining brackets on the light barrier transmitter (2x).

B Set the lowest light beam of the light barrier transmitter to a height of at least 640 mm and maximum 680 mm (the lenses are visible in the light barrier transmitter).

C Retighten the clamping screws.

D Set the lowest light beam of the receiver to a height of at least 640 mm and maximum 680 mm (the lenses are visible in the receiver).

E Average out the height of the deflection mirror.

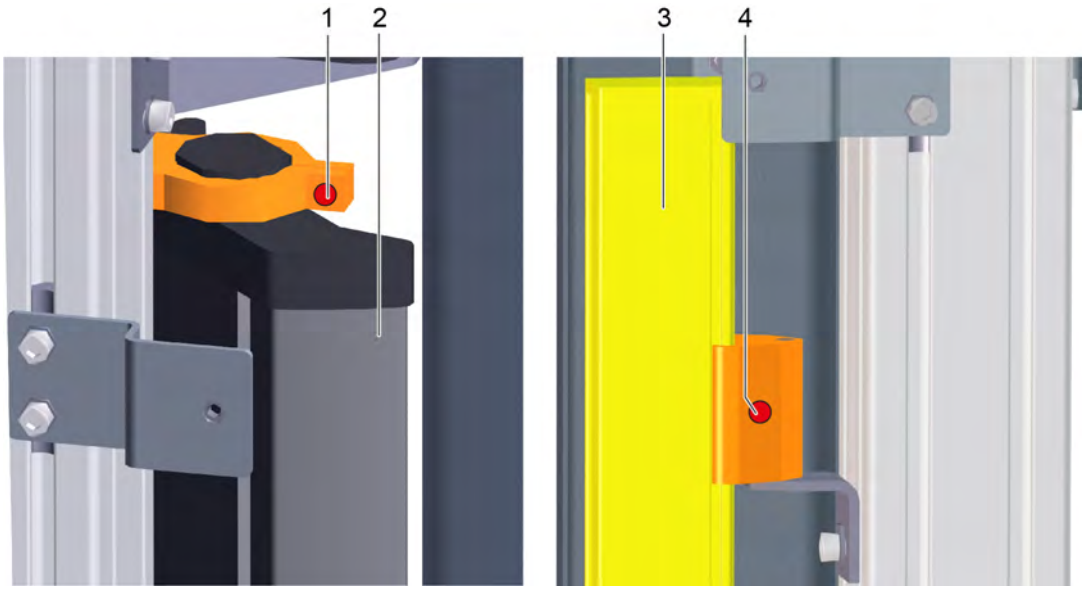
a) Loosen the screws on the brackets and adjust the height of the mirror.

b) Retighten the screws.

F Repeat the process on the second pair of pillars.

8.2.4 Alignment with 2 deflection mirrors

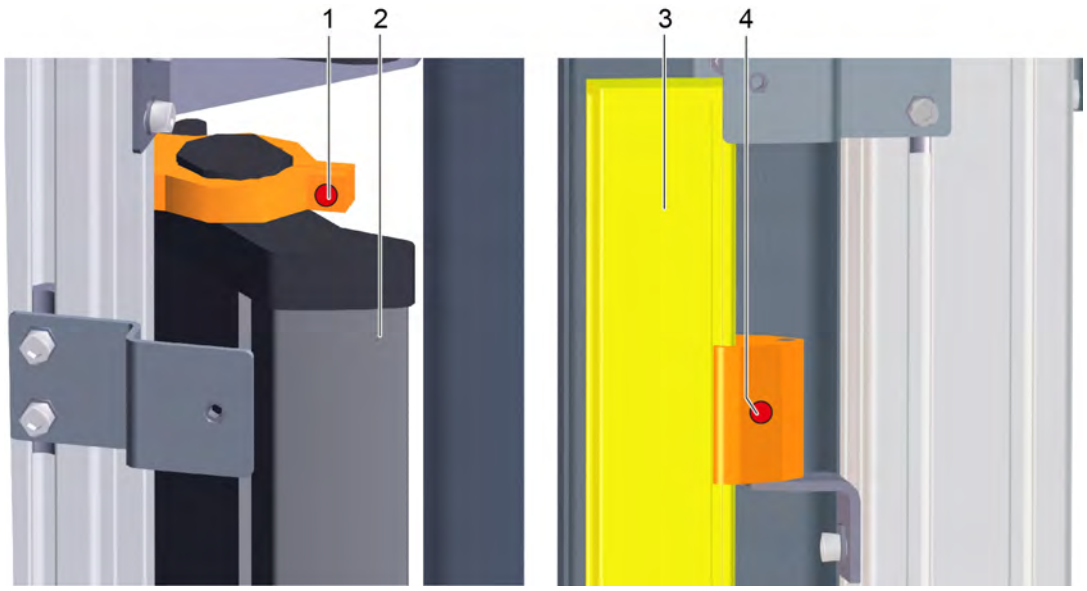
Tip:
Start the alignment on cutter front left.
Always slightly tighten the elements after alignment.
A small deviation of the laser point from the target is permissible (see *Aligning the light curtain*).



1	Clamping screw	3	Light barrier transmitter/receiver
2	Mirror	4	Clamping screw

Explanation for aligning the light barrier transmitter, receiver, and mirror:
- To align the mirror, slightly loosen the clamping screws (1) (2x).
- To align the light barrier transmitter/receiver, slightly loosen the clamping screws (4) (2x).

8.2.4.1 Alignment process

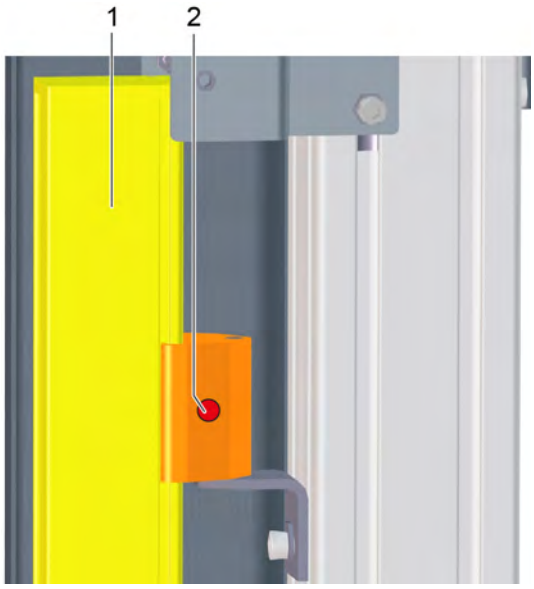


1	Clamping screw	3	Light barrier transmitter/receiver
2	Mirror	4	Clamping screw

A Undo the clamping screws on the light barrier transmitter.
B Switch on the ILAS on the light barrier transmitter.
C Swivel the light barrier transmitter so that the laser point hits the center of the mirror.
D Rotate the mirror so that the laser point hits the reflector on the receiver or its vicinity.
E Tighten the clamping screws on the light barrier transmitter.
F Loosen the clamping screws on the receiver slightly.
G Switch on the ILAS on the receiver.
H Swivel the receiver so that the laser point hits the center of the mirror.
I Swivel the receiver so that the laser point on the light barrier transmitter hits the reflector or its vicinity.
J Tighten the clamping screws on the receiver.
K Repeat the process on the other pillars.

8.2.5 Fine adjustment

Tip:
The pillar can be slightly tilted by hand. This makes it easier to determine the required adjustment.
The pillar with mirror is present depending on the cutter size.



1 Light barrier transmitter/receiver

2 Clamping screw

A Tilt the pillar slightly to the left until the light barrier is interrupted.
- On the receivers of both light curtain pairs, the red "Interruption" LED lights up.
- A low-volume switching noise of the relay can be heard in the S-box.

B Tilt the pillar slightly to the right until the light barrier is interrupted.
- On the receivers of both light curtain pairs, the red "Interruption" LED lights up.
- A low-volume switching noise of the relay can be heard in the S-box.

C Slightly loosen the clamping screws of the retaining brackets.

D Align the light barrier transmitter / receiver so that the deflection is even until switching to both sides.

E Repeat the process on the other light barrier transmitter/receiver pair.

9 Installing the covers

Note:

Risk of damage.

When installing the covers, it must be ensured that the mirror, light barrier transmitter and receiver module are not damaged.

A Mount the covers and fasten them.

B Repeat the process on all pillars.

10 Initial commissioning

10.1 Activating the pillars

A Switch to the Service user level with **4-2 Password**.
B Select **1-11-10-1 Mode** and set to **on**.

10.2 Checking the pillar deflection

Figure 2: Status indicator without interruption

1 Transmitter 2 Receiver

A Lightly deflect the top area of each pillar by hand.
The indicator for the top half does not light up.
"OUT" indicator lights up red on the receiver.

1 Transmitter 2 Receiver

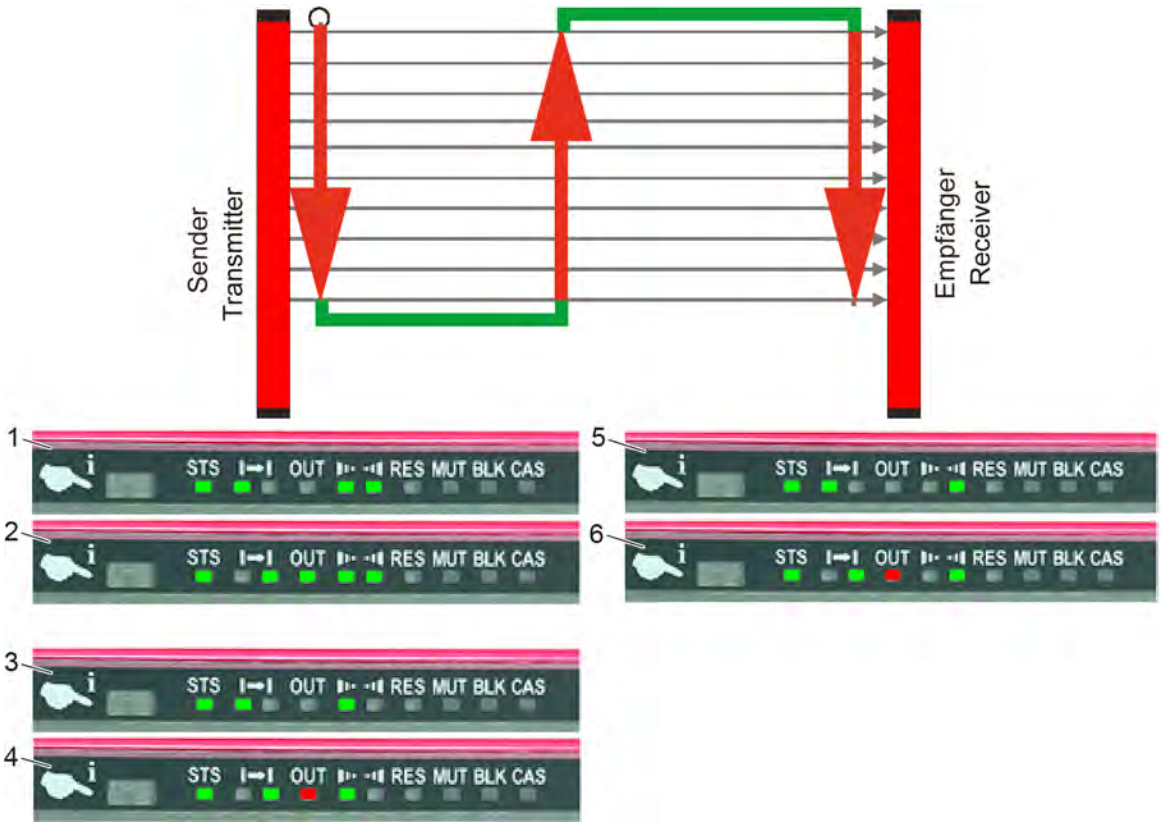
B Lightly deflect the bottom area of each pillar by hand.
The indicator for the bottom half does not light up.
"OUT" indicator lights up red on the receiver.

1 Transmitter 2 Receiver

If the pillar cannot be deflected sufficiently, the pre-leveling is to be performed again while making sure that the springs are not too compressed (see *Aligning the pillars vertically* on page 39). The light curtain must then be re-aligned.

10.3 Checking the light curtain

Testing rod



1	Transmitter without interruption	4	Top receiver interrupted
2	Receiver without interruption	5	Bottom transmitter interrupted
3	Top transmitter interrupted	6	Bottom receiver interrupted

A Switch on the cutter (e.g., press the F1 key).

B Start the self-test with the **3-3-8 S-Test** menu.

C Pull the test piece as shown through the light curtain.

The beam movement stops immediately.

The light curtain indicates an interruption in the monitored area (a red LED on the receiver lights up).

D Press the "OK" soft key.

E Carry out the procedure in three places for each light curtain.

F For cutters with material transport, test processing with material and check for correct functioning of the light curtain.

10.4 Configuring travel keys

The travel keys can be configured so that the workstation/control panel orientation matches that of the cutter. This facilitates the allocation of the travel keys when the workstation is vertical to the cutter.
The following menu settings can be set via the Service user level.

Menu	Description
6-15 Positive X direction	The positive direction of the cutter X axis is transferred to the operating unit. The Y axis is adjusted automatically.

10.5 Checklist

Name of the test point (chapter)	Note/adjusting value	☒
S-box, electronics unit		☐
- The rotary switch of the safety relay in the S-box has the setting "6".		☐
- Bridge plug in the S20 slot on ACS_BF_BOARD is removed.		☐
11.3 Checking the pillar deflection		☐
- Front left X/Y direction		☐
- Rear left X/Y direction		☐
- Rear right X/Y direction		☐
- Front right X/Y direction		☐
11.4 Checking the light curtain (with test piece)		☐
- Front		☐
- Left		☐
- Rear		☐
- Right		☐
Comment		

Place, date

Signature of technician

Place, date

Signature of customer

11 Diagrams

11.1 Overview

Reference dimension – drilling pattern for the light curtain pillars

Identification	Name	Version
5225786	Drilling template front right and rear left	-
5225787	Drilling template front left and rear right	-
5227729	Assembly base reference dimension	-

Electrical system / electronics

Identification	Name	Version
5210886	Wiring SLC 2 RXs / 2TXs with mirrors	V1_0_B

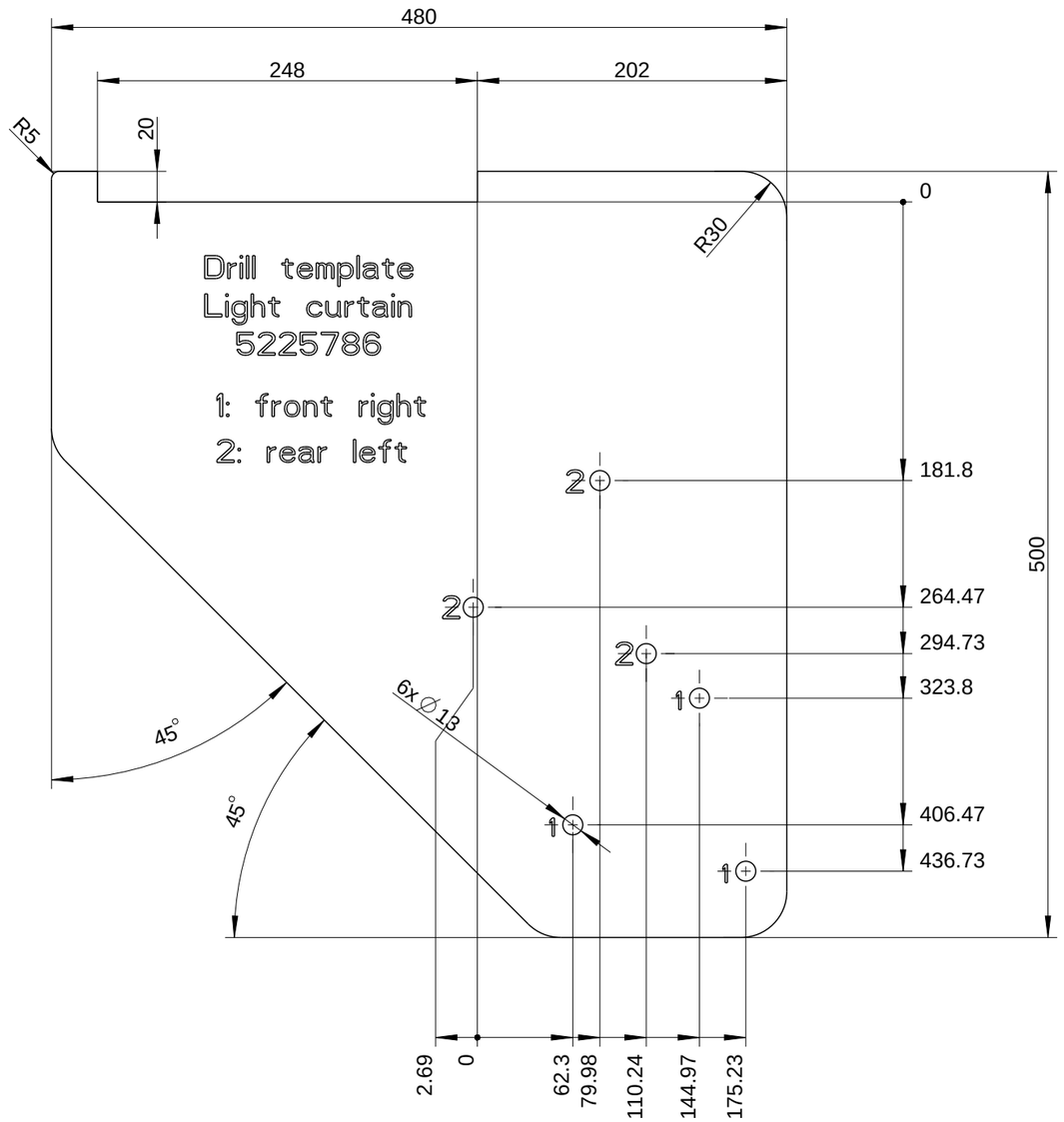
Freigegeben

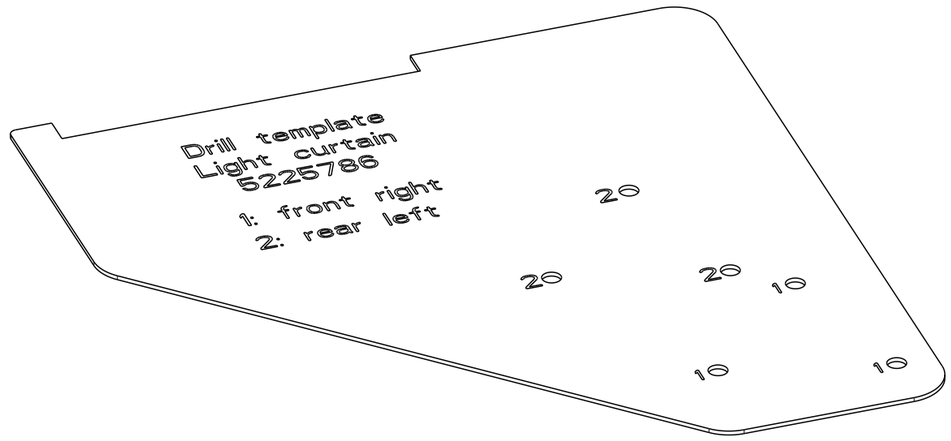
Ohne Zusatzang. = Lieferzustand
Bei Halbz. = blank nach DIN05.050

Zulässige Abweichung für untolerierte Plan-Rundlauf und/oder Symmetrie				
	-			
	-			

Zul. Abweichung für untolerierte Winkelmasse pro 100 mm			
Nennbereich des kürzeren Schenkels			
>0.5 bis 10	>10 bis 50	>50 bis 120	über 120
±1.8	±0.9	±0.6	±0.3
±2.6	±1.5	±0.7	±0.4

Genauigkeitsgrad	Zulässige Abweichung für untolerierte Längenmasse						
	Nennmassbereich						
	bis 0.5	>0.5 bis 6	>6 bis 30	>30 bis 120	>120 bis 315	>315 bis 1000	über 1000
1	±20%	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2
2	±40%	±0.2	±0.5	±0.8	±1.2	±2	±3
m	gültiger Genauigkeitsgrad						





Material: Forex Classic 3mm

Schablone vorne rechts und hinten links	Kein_Material	
Benennung	Werkstoff	Bemerkungen

Ähnliches Teil	Änderungen				
5209090; 5225787					

Ra 3.2 — Kanten gebrochen 0.2 ... 0.4x45°

Projekt: S3 LiVo
Schablone vorne rechts und hinten links
S3 Bohrbild Lichtvorhang-Säulen

Massstab	Gezeich.	08.01.21	nru
1:4	Geprüft	11.01.21	nru
	Normgepr	-	-
A3	Ersatz für		

ZÜND swiss cutting systems

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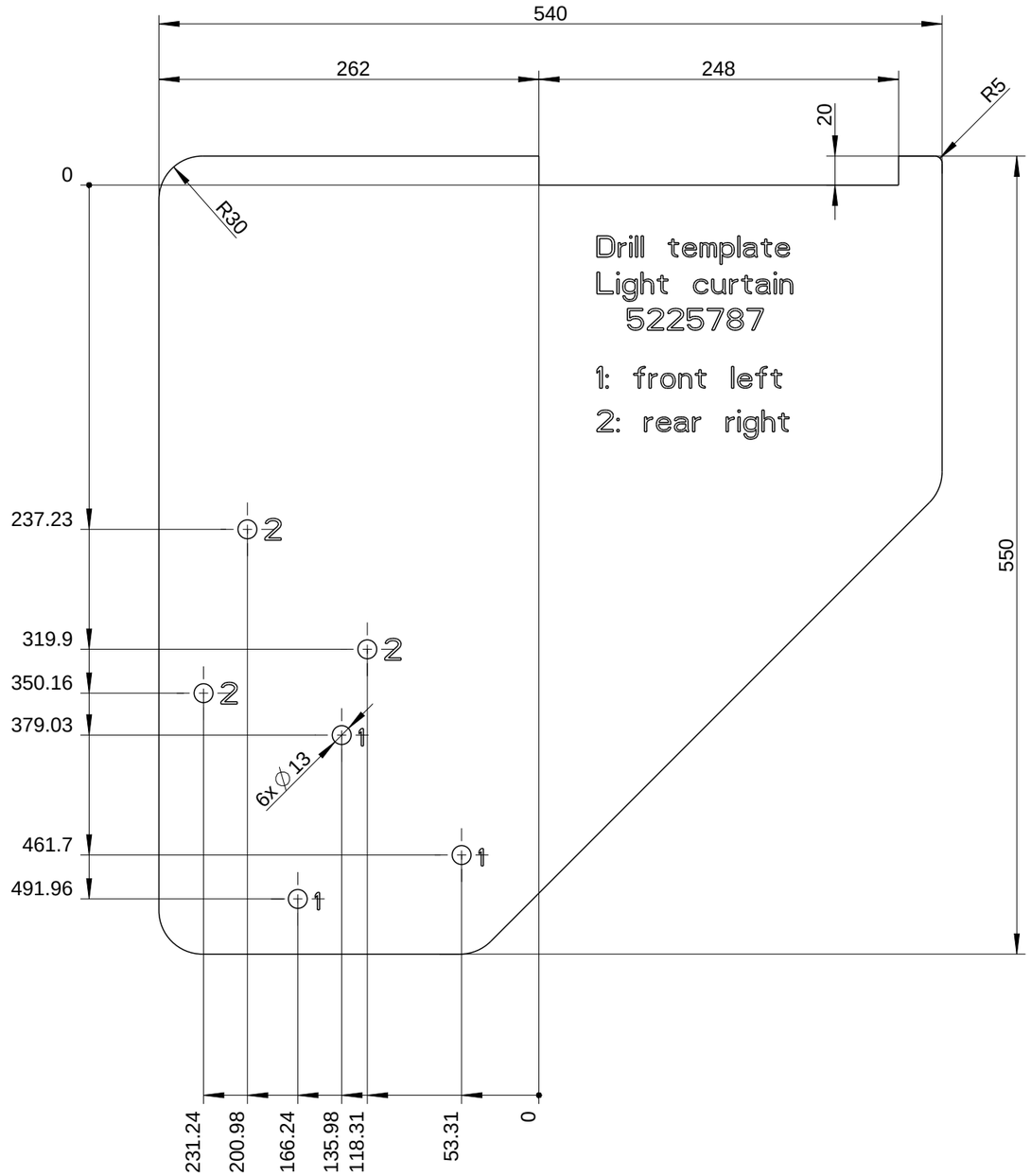
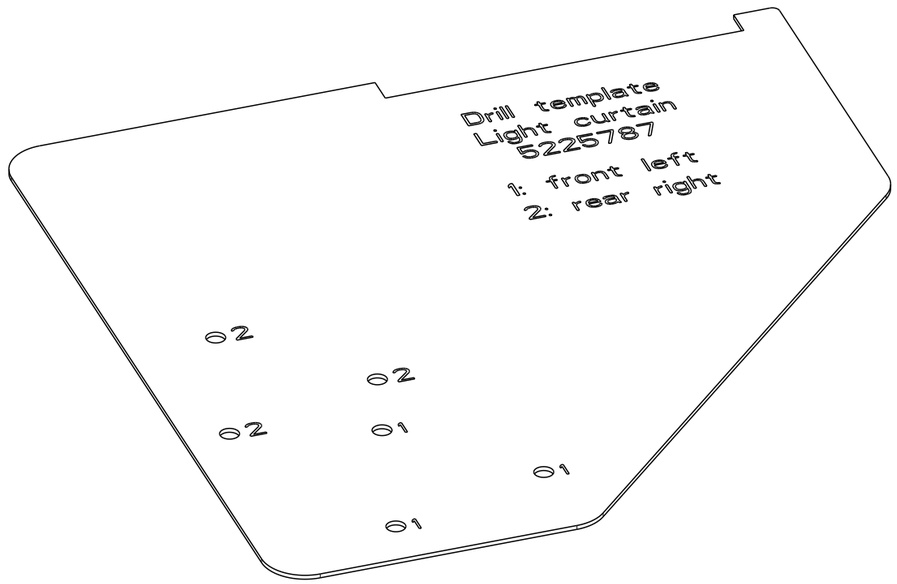
Fortschrittskenner:230 = Freigegeben

5225786

Status -





Material: Forex Classic 3mm

Freigegeben

Ohne Zusatzang. = Lieferzustand
Bei Halbz. = blank nach DIN05.050

Zulässige Abweichung für untolerierte Plan-Rundlauf und/oder Symmetrie			
	-	-	

Zul. Abweichung für untolerierte Winkelmasse pro 100 mm			
Nennbereich des kürzeren Schenkels			
>0.5 bis 10	>10 bis 50	>50 bis 120	über 120
±1.8	±0.9	±0.6	±0.3
±2.6	±1.5	±0.7	±0.4

Genauigkeitsgrad	Zulässige Abweichung für untolerierte Längenmasse						
	>0.5	Nennmassbereich			>120	>315	über
	bis 0.5	bis 6	>6 bis 30	>30 bis 120	bis 315	bis 1000	1000
1	±20%	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2
2	±40%	±0.2	±0.5	±0.8	±1.2	±2	±3
m	gültiger Genauigkeitsgrad						

Schablone vorne links und hinten rechts	Kein_Material	
Benennung	Werkstoff	Bemerkungen

Ähnliches Teil	Änderungen						
5209090; 5225787							

Ra 3.2 — Kanten gebrochen 0.2 ... 0.4x45°

Projekt: S3 LiVo
Schablone vorne links und hinten rechts
S3 Bohrbild Lichtvorhang-Säulen

Massstab	Gezeich.	08.01.21	nru
1:4	Geprüft	11.01.21	nru
	Normgepr	-	-
A3	Ersatz für		

ZÜND swiss cutting systems

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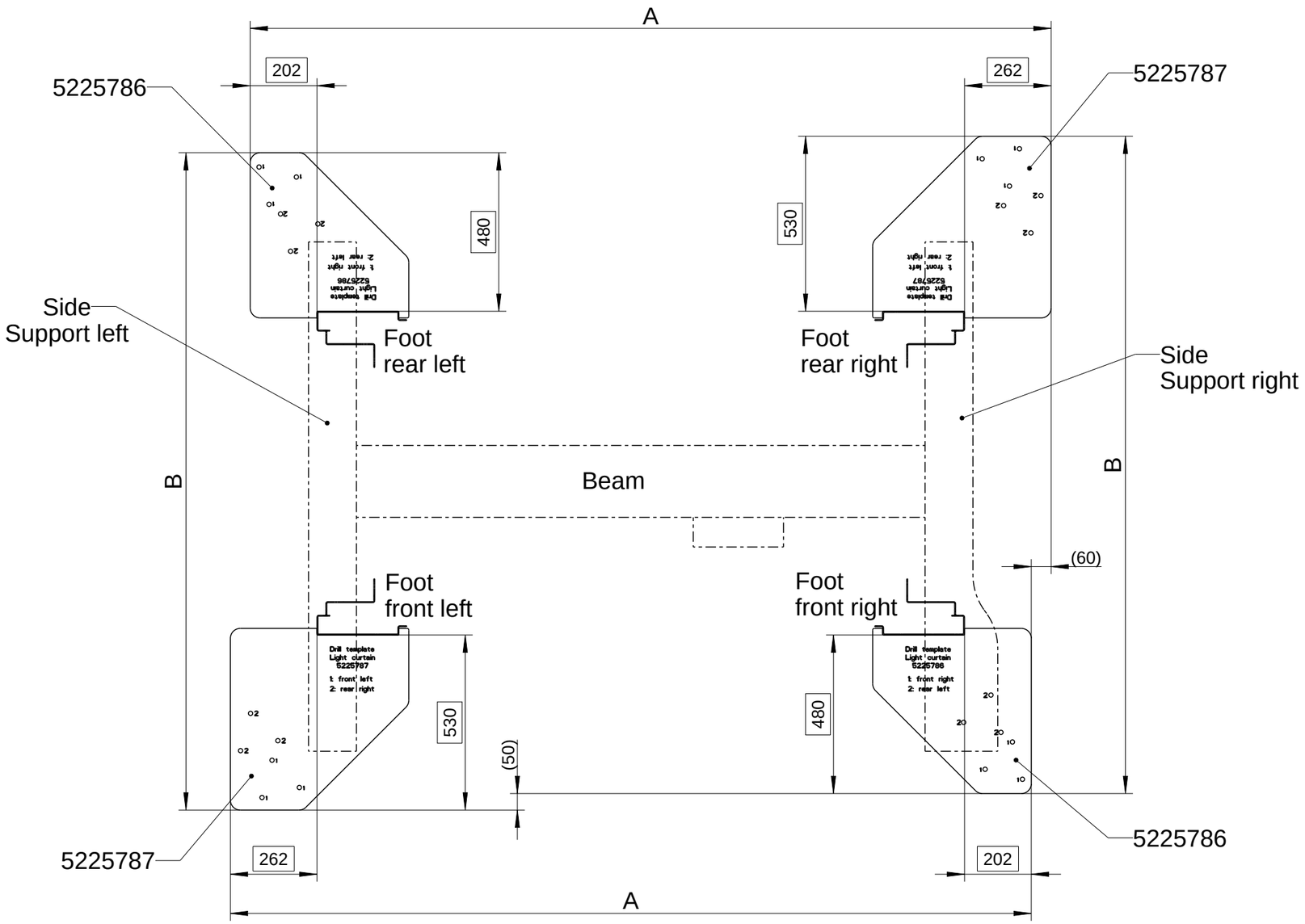
Fortschrittskenner:230 = Freigegeben

5225787

Status -



S3	A	B
M-800	2424	1990
M-1200	2424	2390
M-1600	2424	2790
L-1200	2894	2390
L-1600	2894	2790
XL-1200	3364	2390

Applies to all cutter sizes, shown is an M-800.
Gilt für alle Cuttergrössen, abgebildet ist ein M-800.

all dimensions in [mm] / alle Massangaben in [mm]

Creo-Print Druckdatum: 02.12.21

Sheet-Blatt: 1 (1)
Montageunterlage Kontrollmasse
S3 mit LiVo

Massstab	Gezeich.	02.12.21	nru
1:15	Geprüft	03.12.21	nru
A3	Ersatz für		

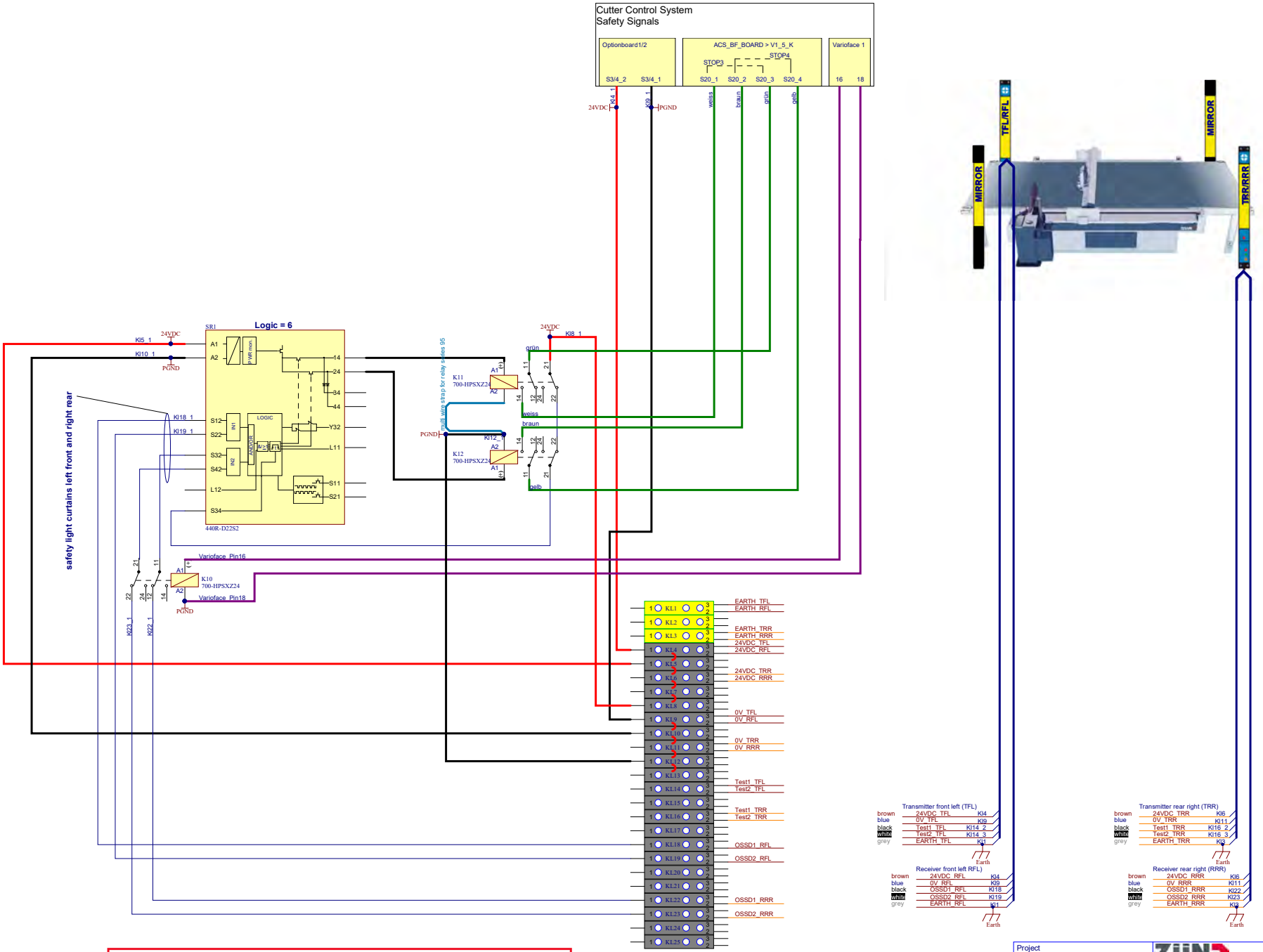
ZÜND swiss cutting systems

Für dieses Dokument behalten wir uns alle Rechte vor.

Fortschrittskenner:230 = Freigegeben

5227729

Status -



Explanations of logic settings 440R D22x2

Manual Monitored Reset	Automatic / Manual Reset
1 (IN1 OR IN2) OR L12	5 (IN1 OR IN2) OR L12
2 (IN1 AND IN2) OR L12	6 (IN1 AND IN2) OR L12
3 (IN1 OR IN2) AND L12	7 (IN1 OR IN2) AND L12
4 (IN1 AND IN2) AND L12	8 (IN1 AND IN2) AND L12

IN1=S12,S22
IN2=S32,S42

Project	Generation3 Safety Light Curtain	
	Date	by
Drawn	15.12.2014	cgr
Mod.	19.01.2015	cgr
Appr.	21.01.2015	fst
Released		

Zünd Systemtechnik AG
Industriestr. 8
9450 Altstätten

Title: **wiring SLC 2 RXs / 2TXs with mirrors**

Size	Drawing No.	Rev.
A2	5210886	V1_0_B

D:\Elektronik\ACS200\Generation 3 Safety Light Curtain\trunk\Altium\2 Receiver 2 Transmitter SLC with mirror.SchDoc