

# Mounting instruction

## CS top



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Translation of the original mounting instruction

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## GENERAL REMARKS

### Introduction to Mounting Instruction

Alteration service: Yes  
 Staff: According to curriculum for apprenticeship as a body and vehicle mechanic and a body and vehicle construction mechanic.

This Mounting Instruction is part of the delivery and an important help for successful mounting. Therefore, it must be available to the mechanic during the mounting works.

Furthermore, the assembly guidelines of the applicable vehicle producers must be obeyed.

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### Instruction and training support

As an employer, you are obliged to inform and instruct your personnel about existing legal and accident prevention regulations.

The personnel must have understood these instructions, and it must be safeguarded that the instructions are obeyed.

Only in this way you will reach safety and danger awareness of your personnel at work.

### Example for training topics

#### 1. About Safety

- Accident prevention regulations
- General legislation
- General safety hints
- Measures in emergency cases
- Personal protective equipment

#### 2. Maintenance and repair regulations

- Correct use of cleaning agents and lubricants
- Special experience of the mechanic in maintenance, repair, cleaning and upkeep of the product

# Hints

**Attention:**  
The surfaces of the TSE modules must not be contaminated with caustic cleaning fluids. Cleaning fluids with the appropriate labeling are aggressive and can cause damage to all component surfaces. These should expressly not be used for gentle cleaning.

Nummer	Symbol
GHS05	corrosivity



**ATTENTION!**  
Texts with this symbol will warn you against possible mistakes in mounting and, therefore, against potential material damages.



**HINT!**  
Texts with this symbol will give you tips or additional information.



**TIGHTENING TORQUE!**  
Texts with this symbol will give you necessary tightening torques.



**You need holes!**  
Texts with this symbol indicate the setting of holes.

# Safety

## General

Although our products are in accordance with the state of the art, they may pose a risk if:

- they are mounted by unskilled personnel
- they are maintained improperly

## Safety hints

This safety instruction informs you about the products of TSE Trailer System Engineering GmbH & Co. KG. It contains information about maintenance and repair of the parts and their components. The service instruction has only been written for skilled personnel of qualified and authorized specialized companies in motor vehicle crafts. The service instruction is not applicable for other target groups.

We want to support specialized companies with the present mounting instruction during the mounting works with our products.

TSE Trailer System Engineering GmbH & Co. KG accepts no liability for the installation of inapplicable or unreleased parts in their products.

Defects due to wrong handling, aggressive cleaning agents, use of force or subsequent changes of the delivered product or single components of it, as well as non-observance of the safety hints and consequential damages caused thereby, are not covered by our warranty.

Only use unchanged original parts and accessories supplied by the manufacturer.

We do not accept any warranty for the correctness, completeness or currency of the given information. The contents and information of this mounting instruction are neither a warranty or warranted characteristics within the meaning of German legislation, respectively the German Civil Code (Bürgerliches Gesetzbuch (BGB)), nor can they be interpreted as such.

No claims can be derived from provision of information, recommendation or consulting. Liability for damages is generally excluded as far as we are not responsible in the sense of intent or gross negligence, or as far as this does not contradict mandatory legal provisions.

Texts and graphics are subject to our rights of use; copy rights or right of distribution in any form require our agreement.

Mentioned brand names, even if they are not marked as such in every case, are still subject to the regulations of the trade mark law.

If any disputes of legal nature occur from applying information found in this mounting instruction, they shall solely be subject to the regulations of German law.

The Amtsgericht Stuttgart (Local Court in Stuttgart) is deemed to be agreed on as place of jurisdiction. If some clauses of this declaration about limitation of liability do not or no longer comply with the applicable legal provisions, the validity of the other clauses shall remain unaffected thereof.

Read the information in this mounting instruction carefully. Especially, obey the hints for your own safety.

All technical information, descriptions and pictures shall be valid from the day of their printing - respectively the day of any supplements hereto - on.

We reserve the right to make changes due to steady further development.

No claims can be derived from applications and explanations of this publication.

### **Safety hints for the technician:**

Unauthorized people are not allowed to enter the vehicle and the area around it.

Your working area should be in good order.

Only works which you are commissioned and acquainted with have to be executed.

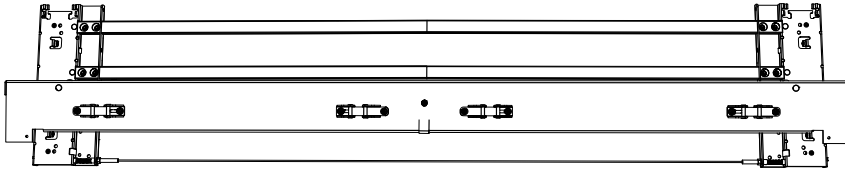
Increased caution is advisable in dangerous areas.

Obey the producer's information and safety hints for the applicable product when you deal with operation materials (oils, grease etc.).

Only applicable lifting devices may be used.

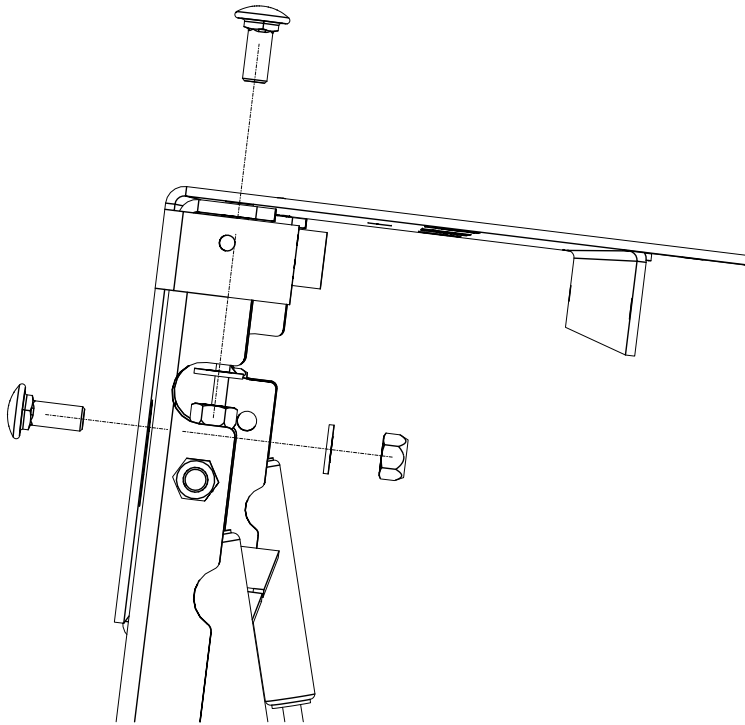
## Guide carriage with crossbar, mounted

1



## Mounting of crossbar

1



Carriage bolt without nut  
M8x20



Washer A8.4



Hexagon nut with all-metal  
clamping element M8



**Torque 25 Nm**

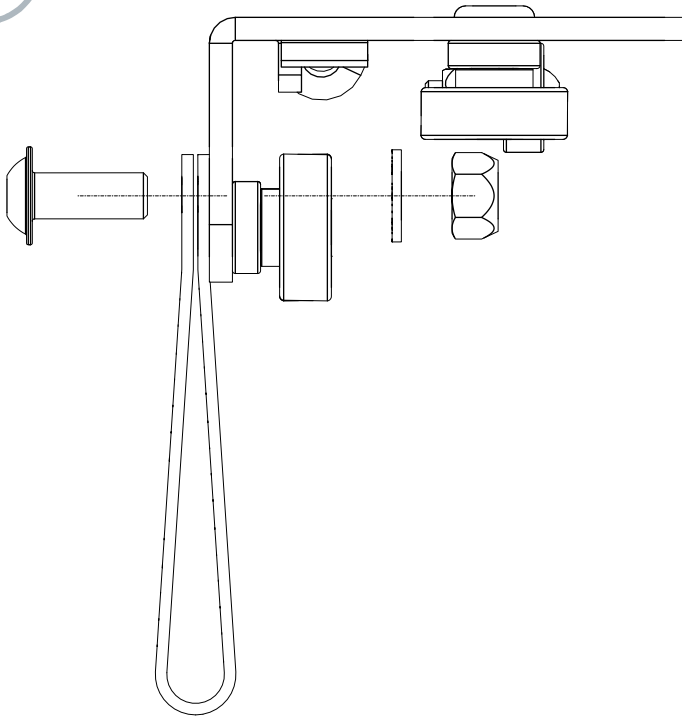
Screw the crossbar with the  
folded up consoles of the  
guide carriage.

Carriage bolts, washers, and  
hexagon nuts have to be  
taken from the **accessories**  
of the applicable top.

## Mounting of pull loops

1

Mount pull loop on the left and right side



Hexagon screw with flange and internal hex M8x20



Washer without chamfer A8.4



Hexagon nut with all-metal clamping element M8



Loop

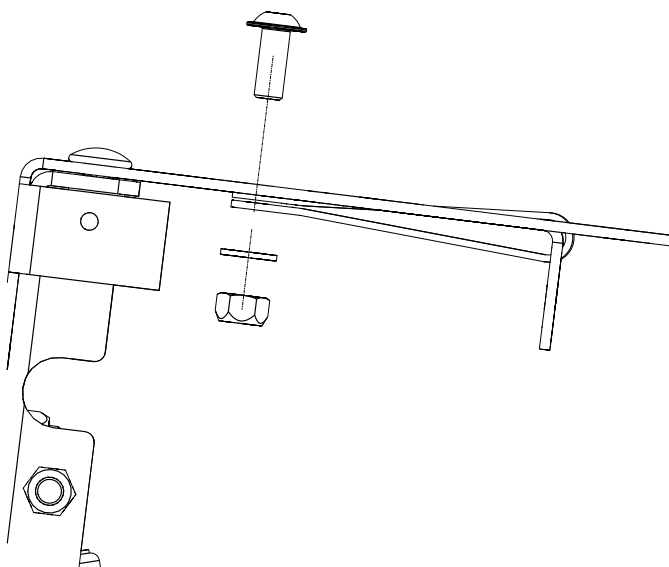


**Torque 36 Nm**

Screws, washers, hexagon nuts and loop have to be taken from the **accessories of the applicable top**.

2

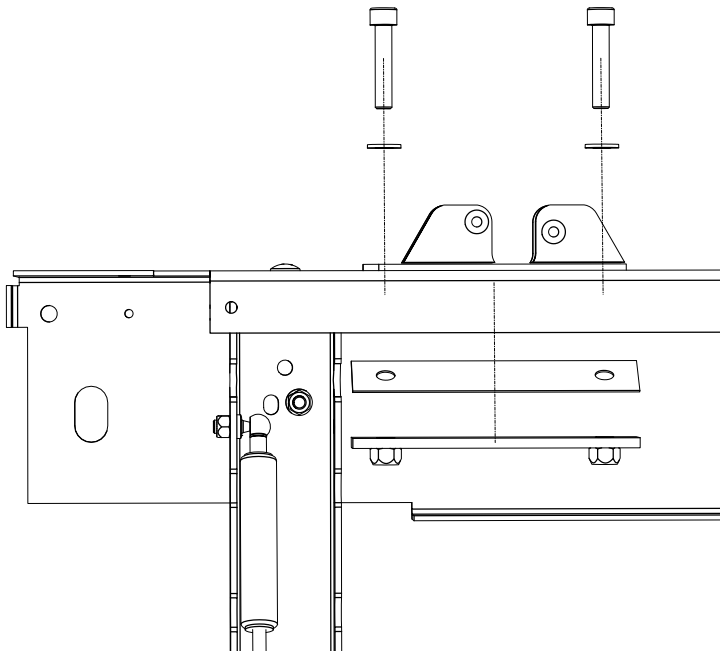
Mounting pull loop intermediate





## Mounting of counter bearing of locking upside

1



Cylinder screw with internal hex M10x50



Washer without chamfer A10.5



Counter bearing of locking upside left/right



Sealing plate



Clamping plate



**Torque 48 Nm**

Cylinder screws, washers, counter bearings of locking, sealing plate and clamping plate complete have to be taken from the **accessories of the applicable door**.

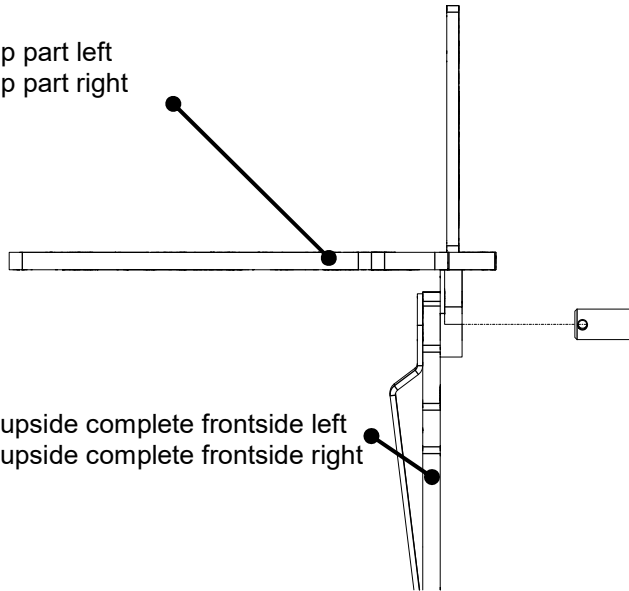
After the completed mounting of the top it is possible – if an upper flap is mounted- to mount this instead of the counter bearing of locking. The exact mounting process can be taken from the Mounting instruction „Upper flap CS“.

## Premounting of sliders front wall IV

1

Connect top part and slider with the bolt

Front wall IV top part left  
Front wall IV top part right



Front wall IV slider upside complete frontside left  
Front wall IV slider upside complete frontside right

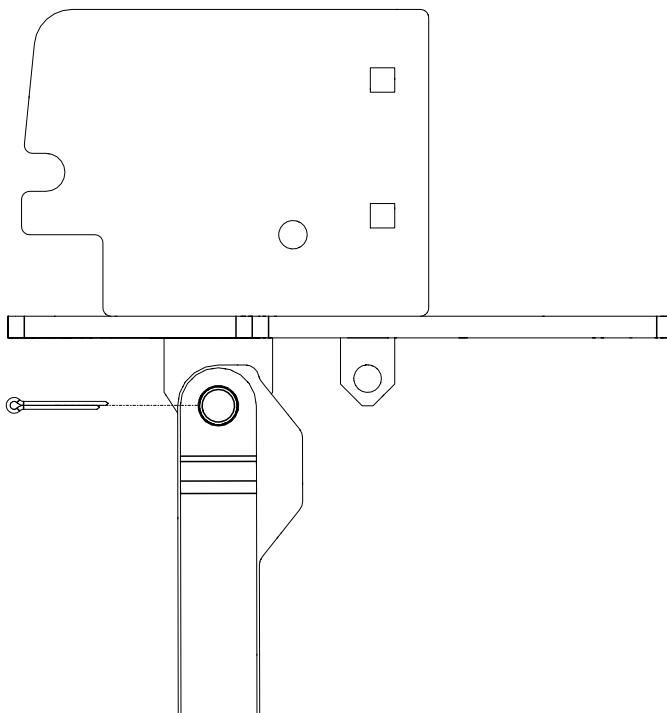


Bolt with head and splint hole

The bolt has to be taken from the **applicable assembly kit**.

2

Fix the bolt with the splint



Splint

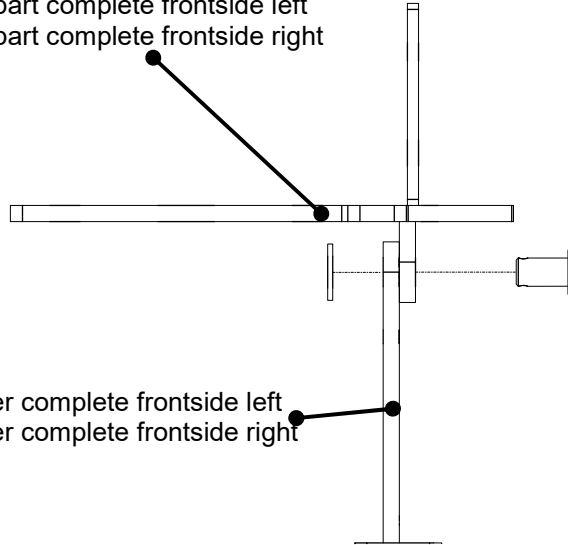
The splint has to be taken from the **applicable assembly kit**.

## Premounting of sliders front wall II

1

## Connect top part and slider with bolt and washer

Front wall II top part complete frontside left  
 Front wall II top part complete frontside right



Front wall II slider complete frontside left  
 Front wall II slider complete frontside right



Bolt with hole head and splint hole

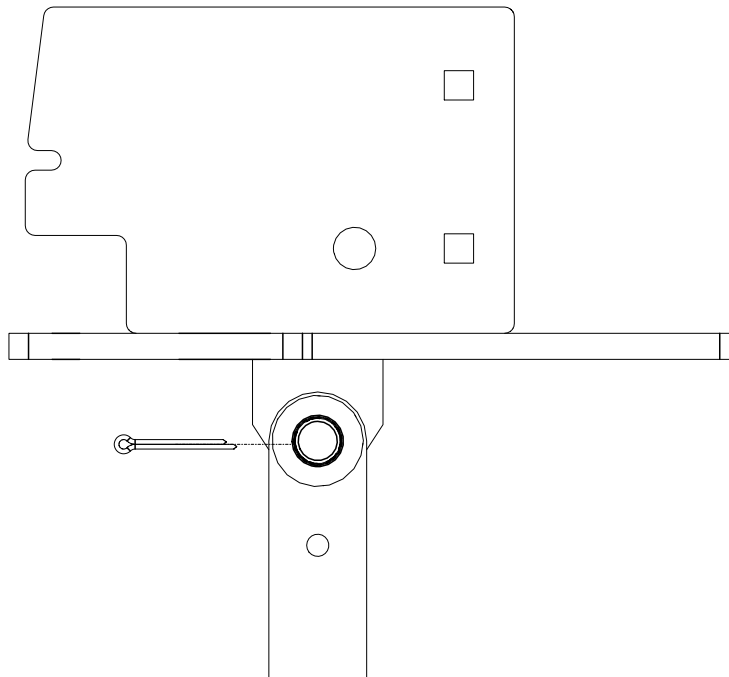


Washer without chamfer A15

Bolt and washer have to be taken from the **applicable assembly kit**.

2

## Fix the bolt with the splint

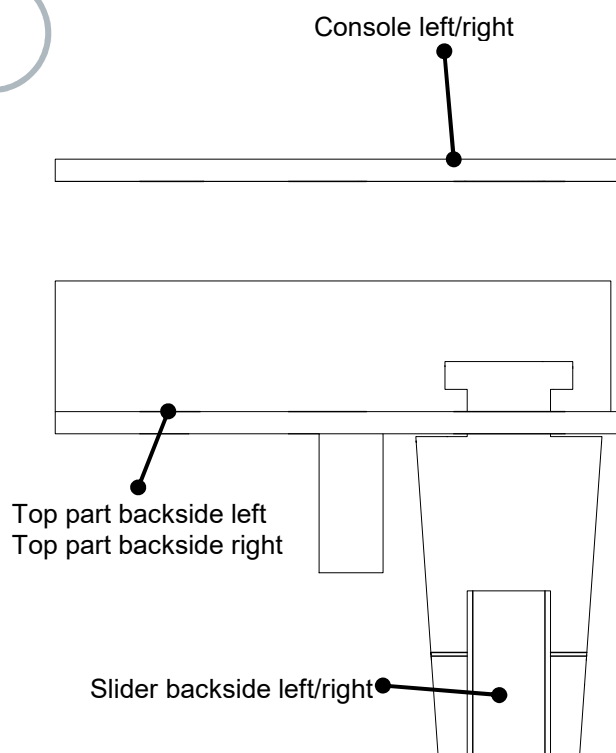


Splint

The splint has to be taken from the **applicable assembly kit**.

## Premounting of rear door III slider

1



Top parts, consoles and sliders have to be taken from the **applicable assembly kit**.

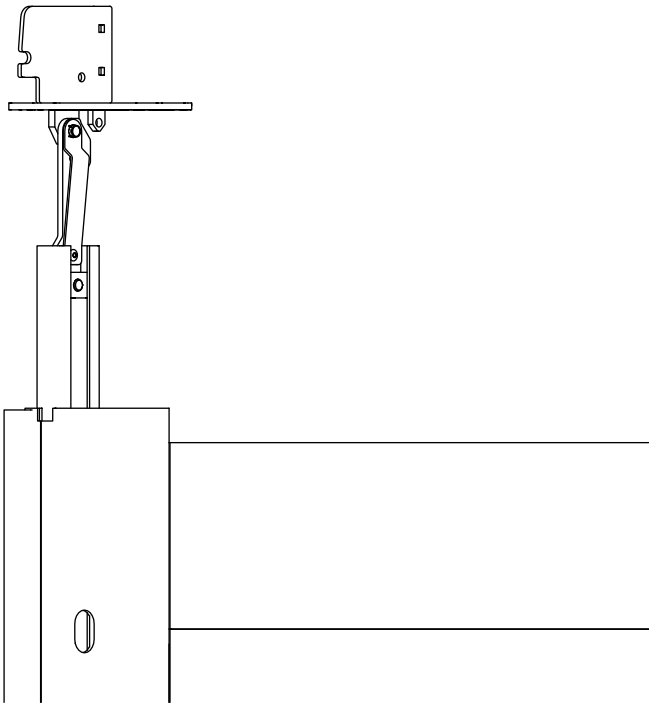


Push the slider through the top part and console, and then fix it with a turn to the right.

## Insertion of slider in the front wall

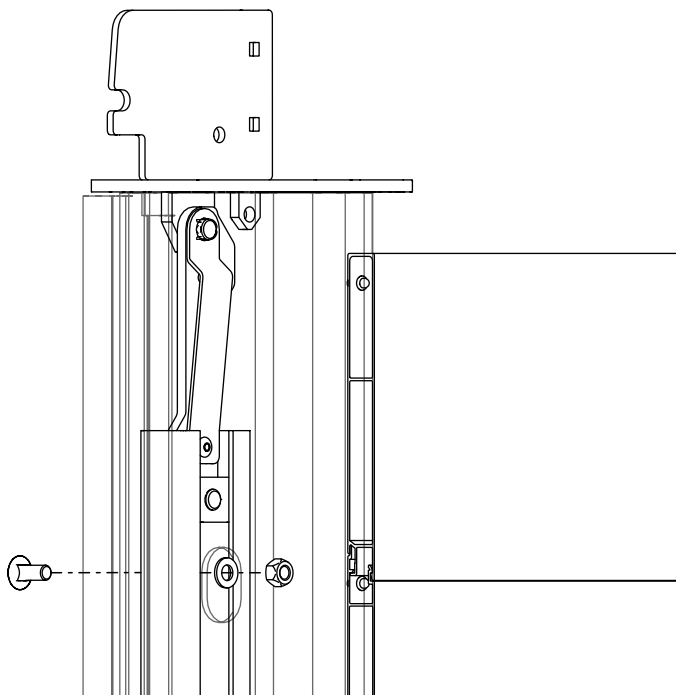
1

Premounted slider, insertion



2

Drill a fixing hole



Carriage bolt without nut  
M10x25



Washer without chamfer  
A10.5



Hexagon nut with all-metal  
clamping element M10



**Torque 48 Nm**

Carriage bolt, washer and  
hexagon nut has to be taken  
from the **applicable  
assembly kit**.

Insert the premounted slider.  
The top part must be seated  
on the stanchion.

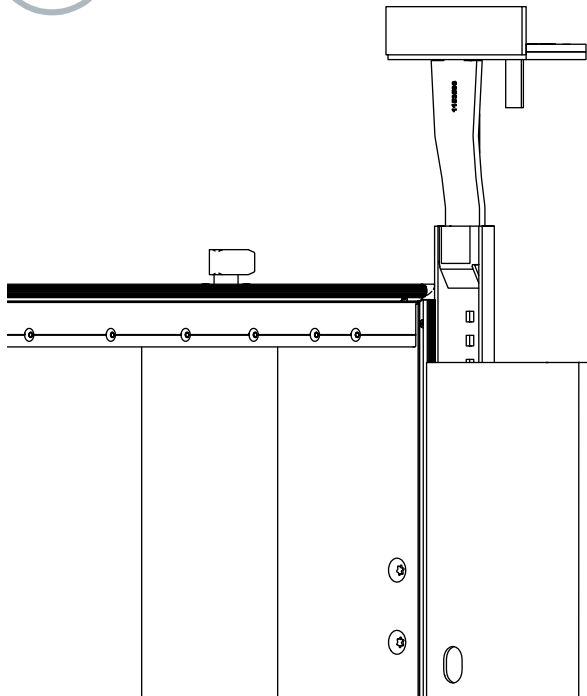


This borehole is only needed  
roof **without** hydraulics!

## Insertion of the slider into rear door

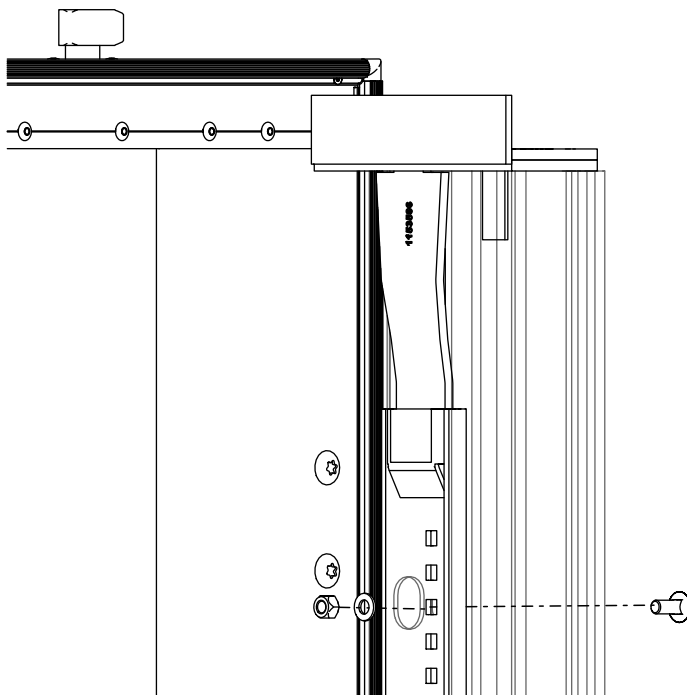
1

Insert the premounted slider



2

Drill a fixing hole



Carriage bolt without nut  
M10x25



Washers without chamfer  
A10.5



Hexagon nut with  
all-metal clamping element  
M10



**Torque 48 Nm**

Carriage bolt, washer and  
hexagon nut have to be taken  
from the **applicable  
assembly kit**.

Insert the premounted slider.  
The top part must be seated  
on the stanchion.

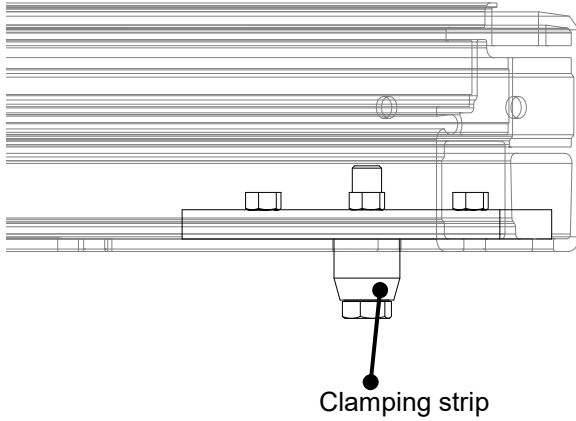


This borehole is only needed  
for a roof **without** hydraulics!

## Mounting of the clamping strip

1

### Mounting of front wall



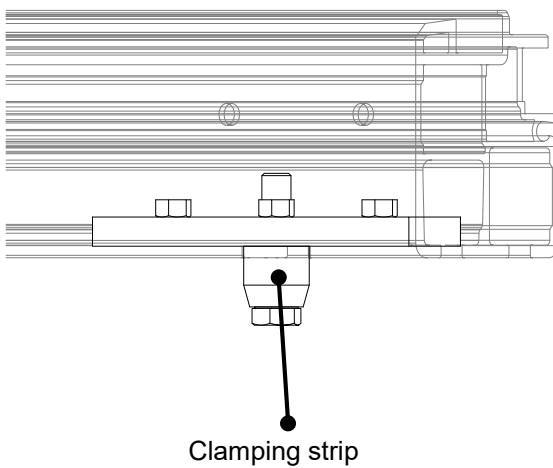
**Torque 84 Nm**



Place the clamping strip in the rail opening, and fix the sleeve with the hexagon screw.

2

### Mounting of rear portal



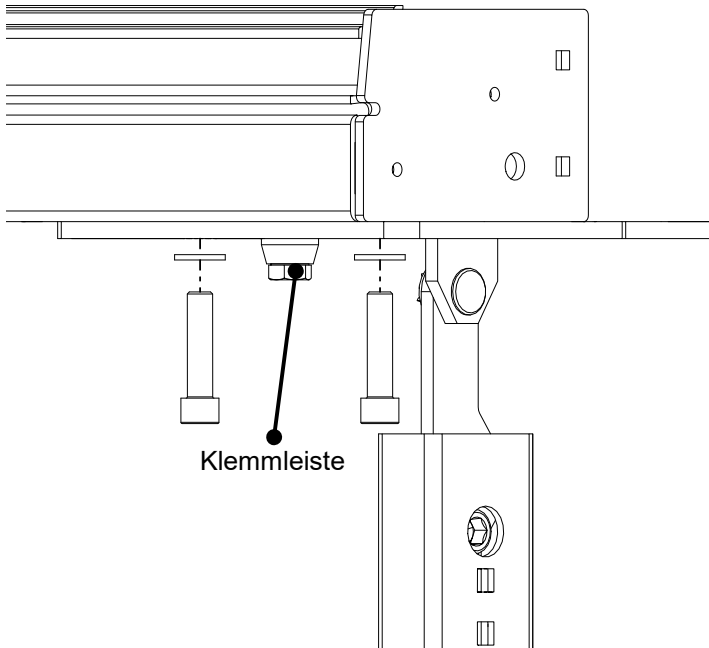
**Torque 84 Nm**



Place the clamping strip in the rail opening, and fix the sleeve with the hexagon screw.

3

## Mounting of front wall



Cylinder screw with internal hex M12x50



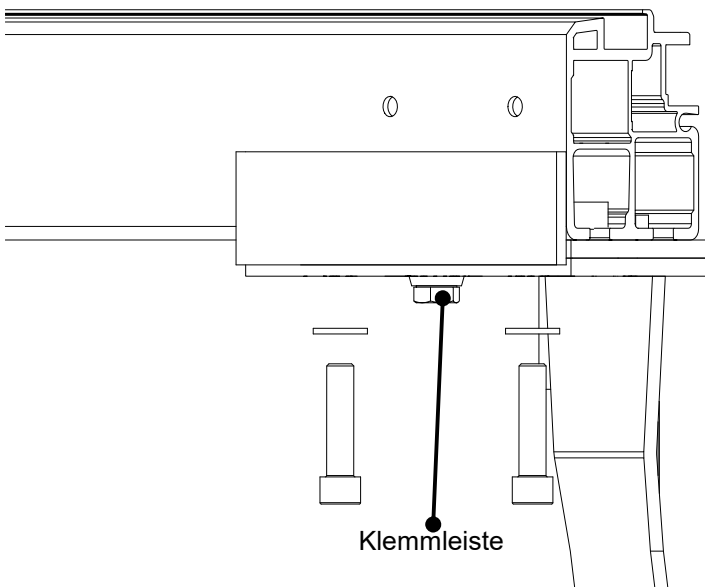
Washer A12.5



Torque 84 Nm

4

## Mounting of rear portal



Cylinder screw with internal hex M12x50



Washer A12.5



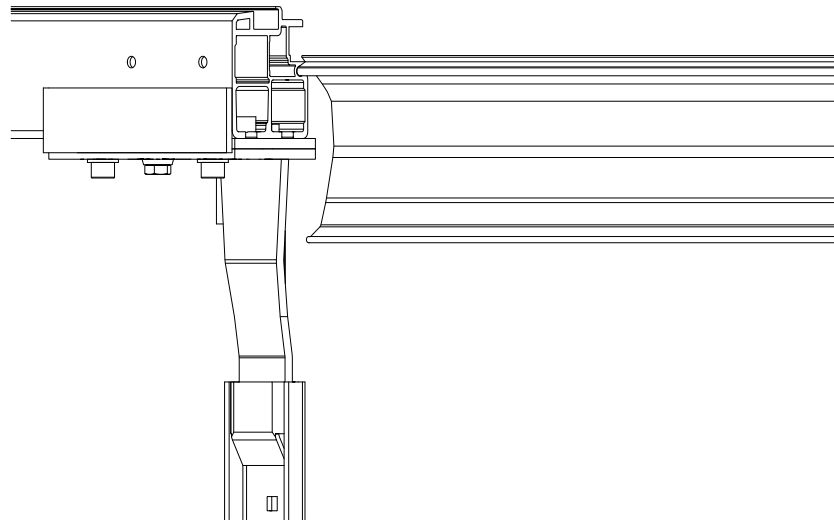
Torque 84 Nm

Lift the pre-mounted outer rails with the lifting device, and insert the sliders into the stanchions.



## Mounting of the sealing profiles

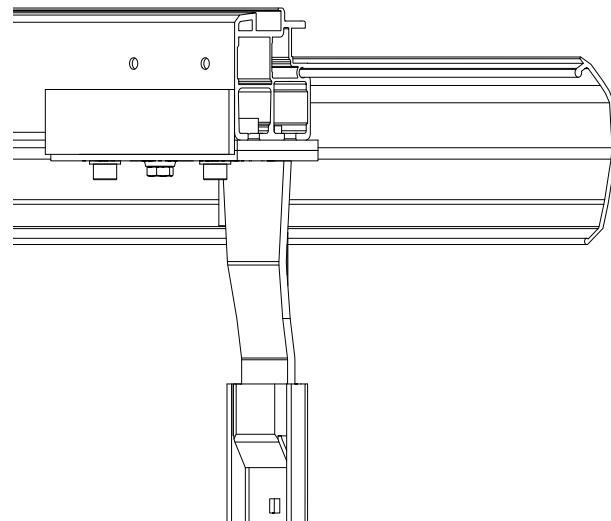
1



The slot for the sealing profiles has to be deburred at the front side at the outer rail.  
For a better mobility at retracting the sealing profiles into the slot, we recommend to use a lubricant.

The sealing profiles are part of the **applicable top**.

2

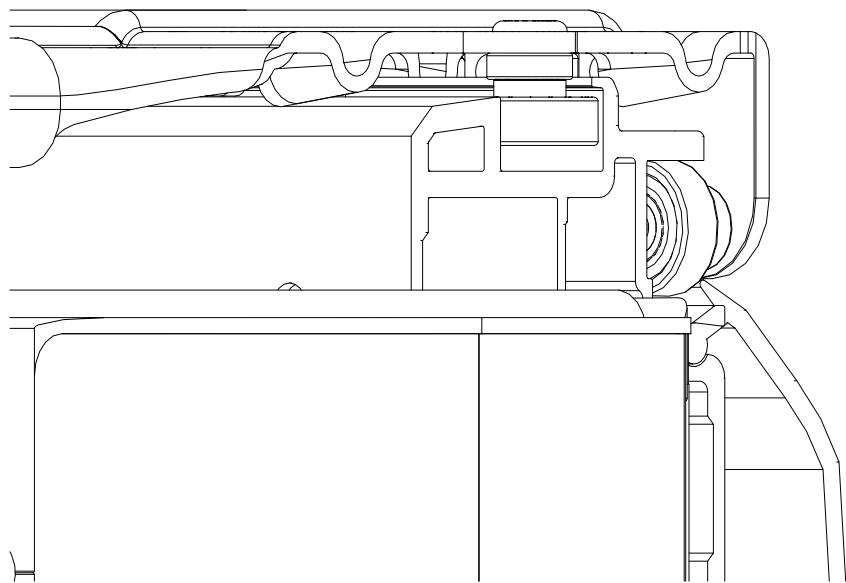


The sealing profile should protrude for about the same distance after the retraction into the slot of the outer rail, frontside and backside.  
This protrusion of the the sealing profile is needed and processed furtheron by the tarp maker.



## Mounting of crossbeam and guide carriage

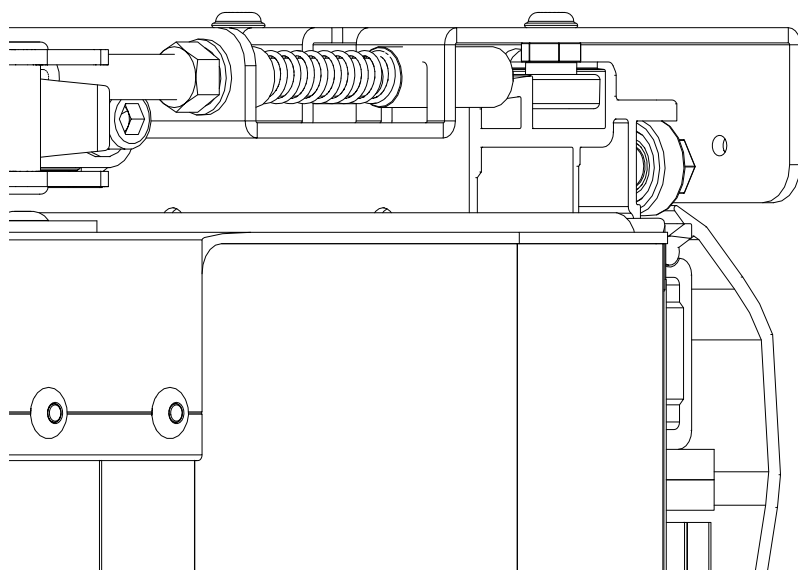
1



Crossbeams have to be inserted into the outer rails from the backside of the vehicle. The number of crossbeams depends on the structural length.

**The crossbeam is part of the applicable top.**

2

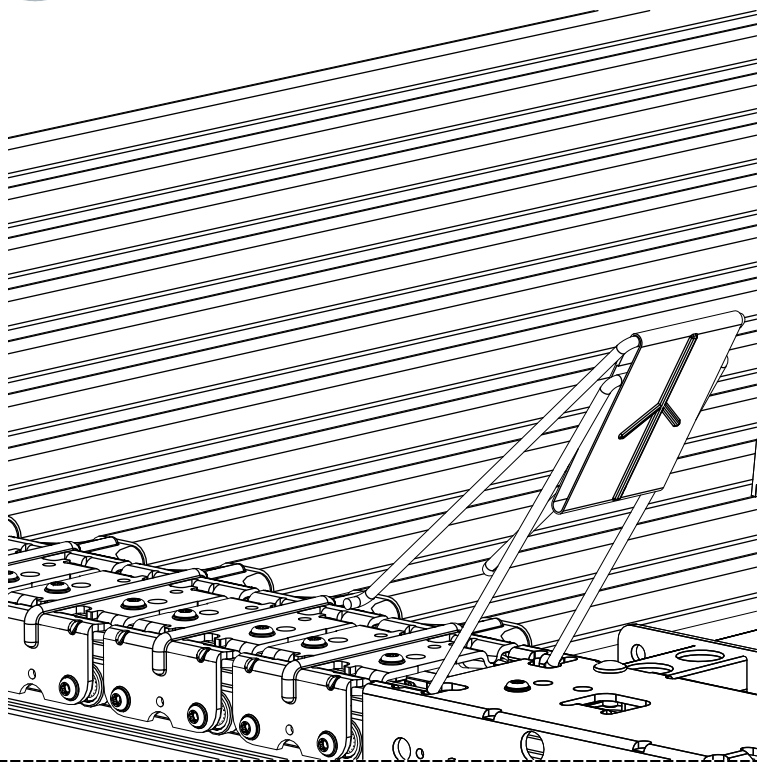


The guide carriage has to be inserted into the outer rails from the backside of the vehicle.

**The guide carriage is part of the applicable top.**

## Montage Scherenpaket

1



Mount the scissor lift package.  
Start mounting at the guide  
carriage for this purpose.

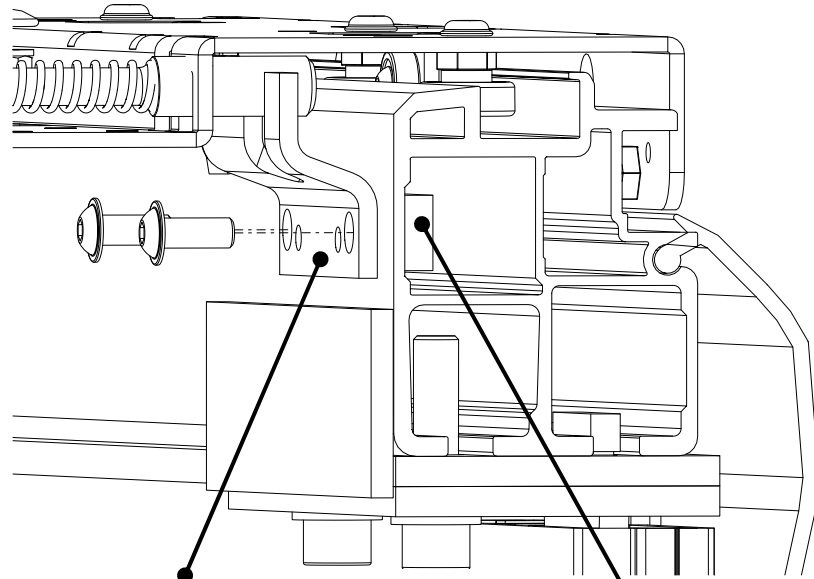


The engraved arrow of the  
scissor lift package **must**  
always show upside and into  
the driving direction

**The scissor lift packages are  
part of the applicable top.**

## Mounting of adjustment guide carriage backside

1



Locking guide carriage backside right  
Locking guide carriage backside left

Counter holder of locking



Fillister head screw M8x20



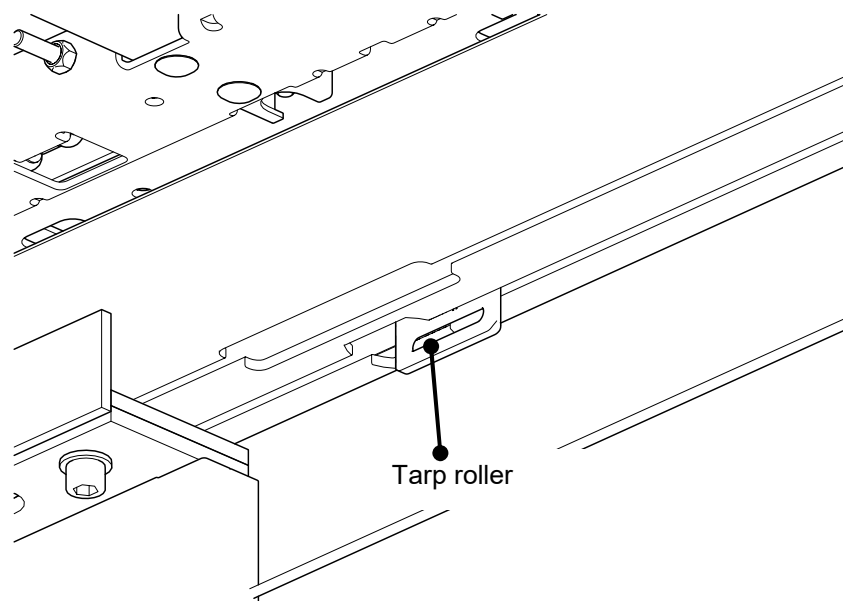
**Torque 36 Nm**

Fillister head screws, lockings  
and counterholders are part of  
the applicable top.

## Mounting of roof and side tarp (made by the tarp maker)

1

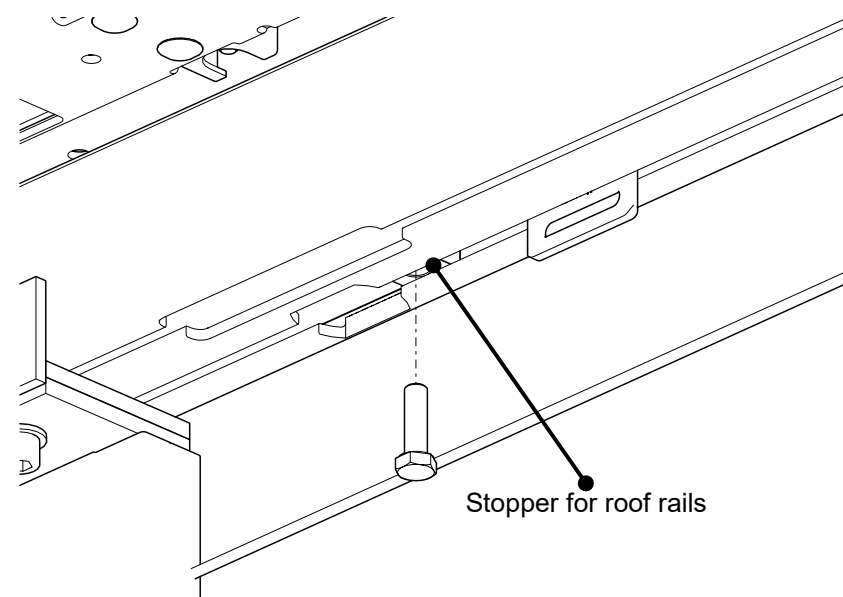
Insert tarp roller at the side



Tarp roller

The tarp roller at the side are **part of the applicable top.**

2



Hexagon screw M10x35



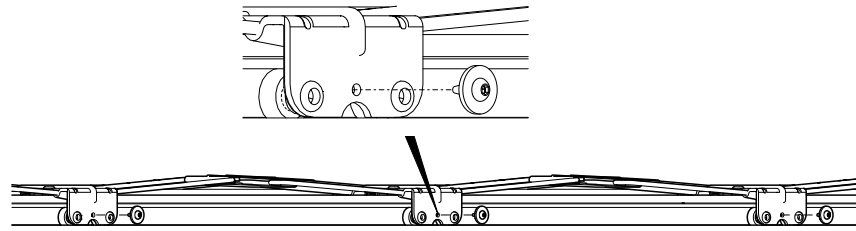
Stopper for roof rails



**Torque 48 Nm**

Stopper for roof rails and hexagon screws are **part of the applicable top.**

3



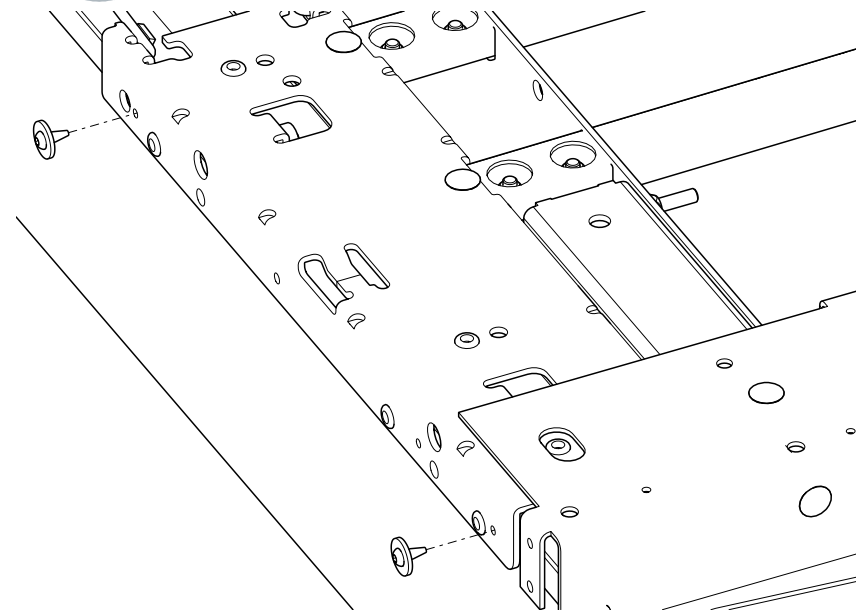
Taptite screw with washer  
M6x15



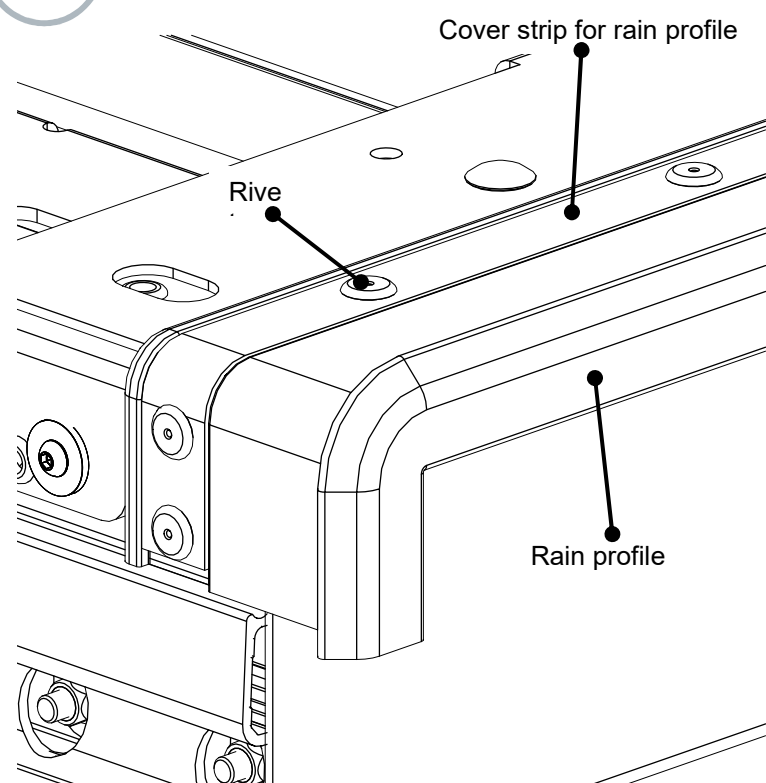
**Torque 12 Nm**

The fixation boreholes serve to  
screw the tarp (with self-  
cutting screws).

4



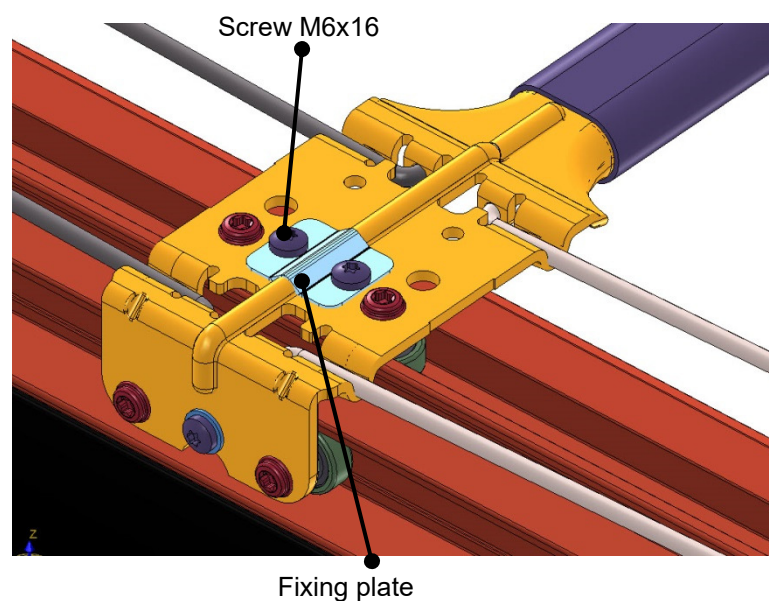
5



The cover strip for the rain profile and the rain profile are **part of the accessories of the applicable top.**

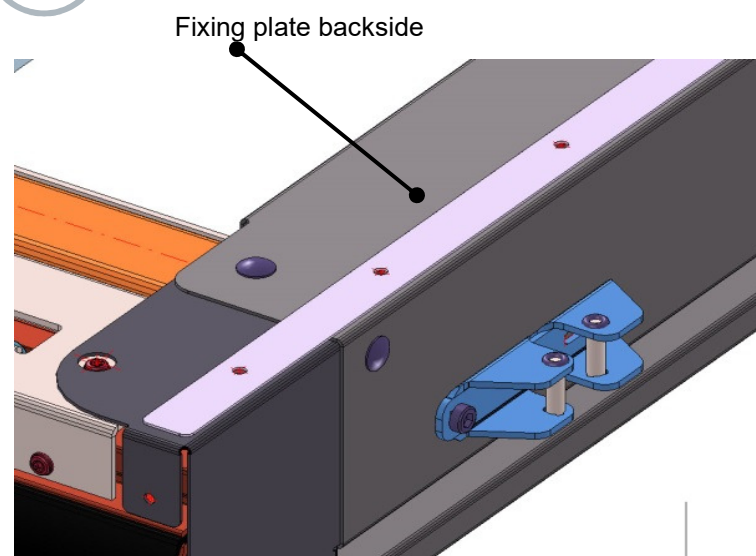
## Mounting of Carapax kit (normally done by tarp maker)

1



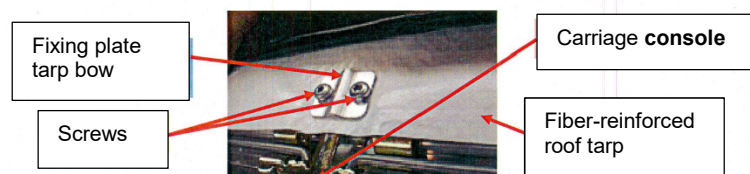
Torque 12 Nm

2

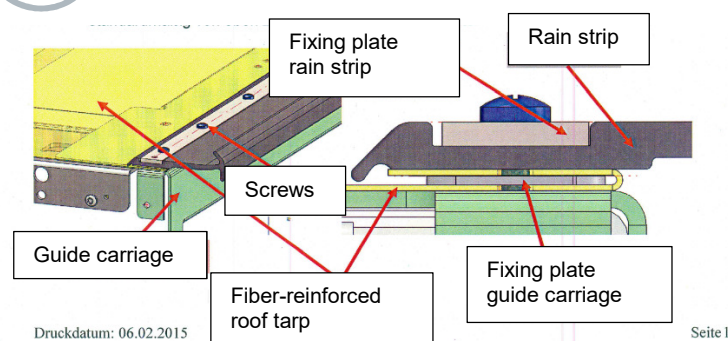




3



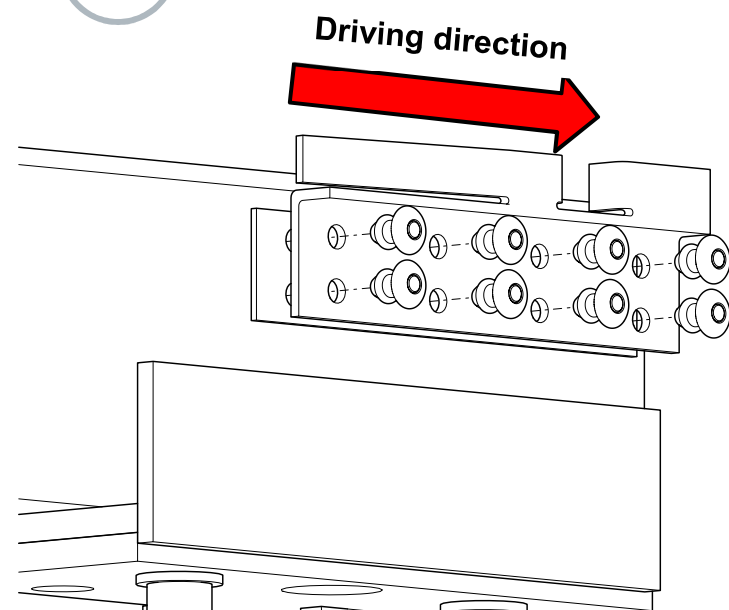
4



## Mounting of adjustment for guide carriage frontside

1

Mounting of the adjustment frontside



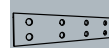
Hemlok Rivet  
KL-Ber 6.8-8.8mm



Locking front-back, right



Locking front-back, left



Distance plates for locking  
frontside

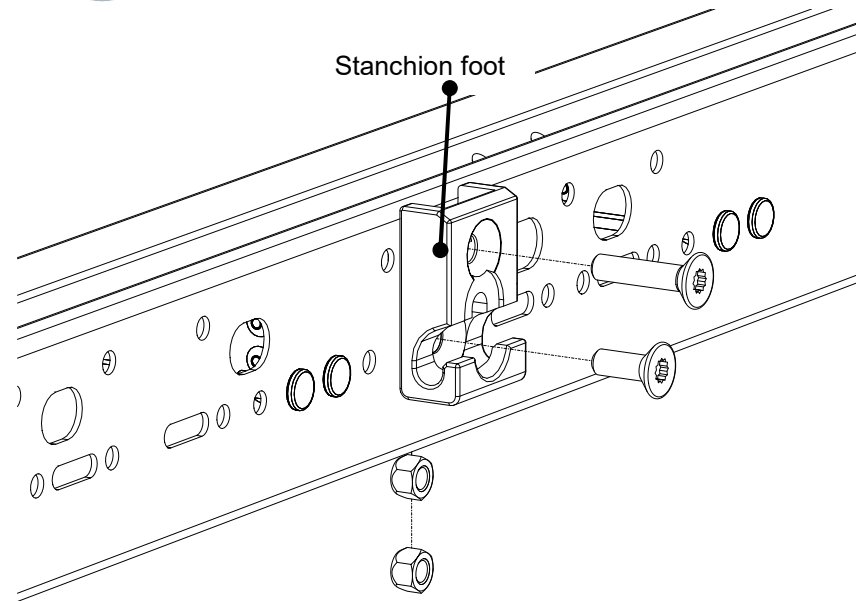


Position can only be  
determined after opening the  
top!

Lockings, distance plates for  
locking and rivets are **part of**  
the applicable top.

## Mounting of hinge stanchion

1



Countersunk screw with  
Torx drive M14x55



Countersunk screw with  
Torx drive M14x40



Hexagon nut M14



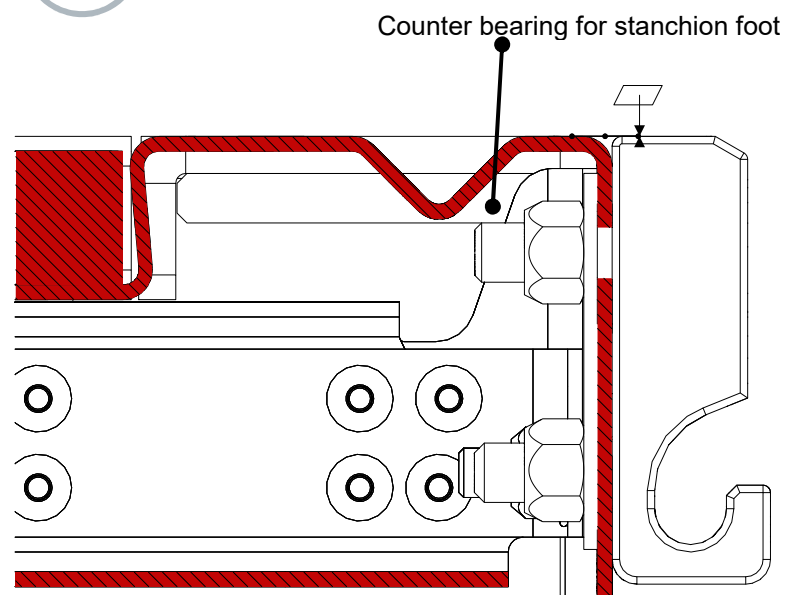
**Torque 190 Nm**

Position of the stanchion foot  
according to calculation sheet

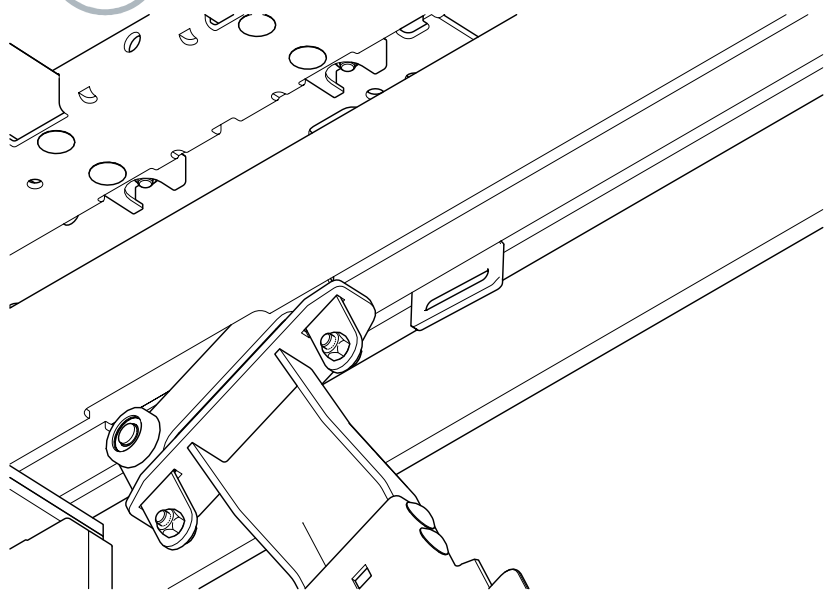
Boreholes are made by the  
customer.

Countersunk screws,  
stanchion foot, hexagon nut  
and counter bearing are **part  
of the applicable stanchion.**

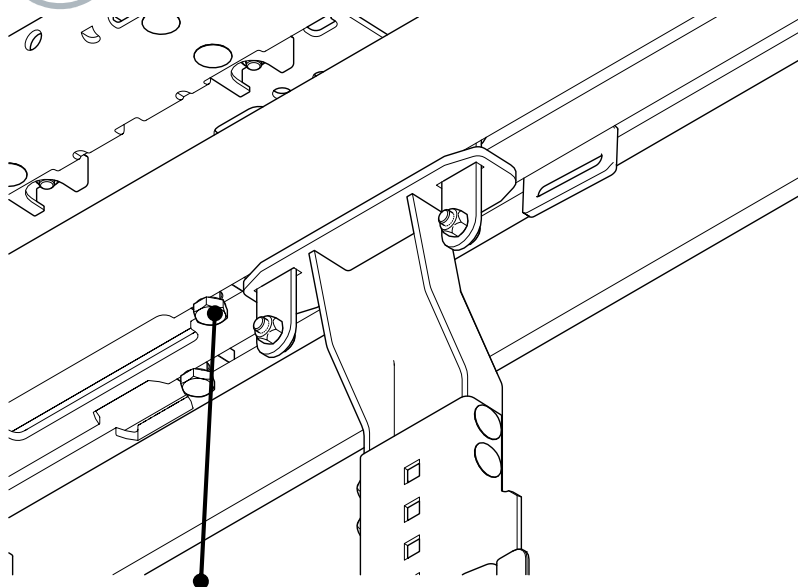
2



3



4



Stopper for roof rails



Stopper for roof rails



Hexagon screw with thread to head M10x35



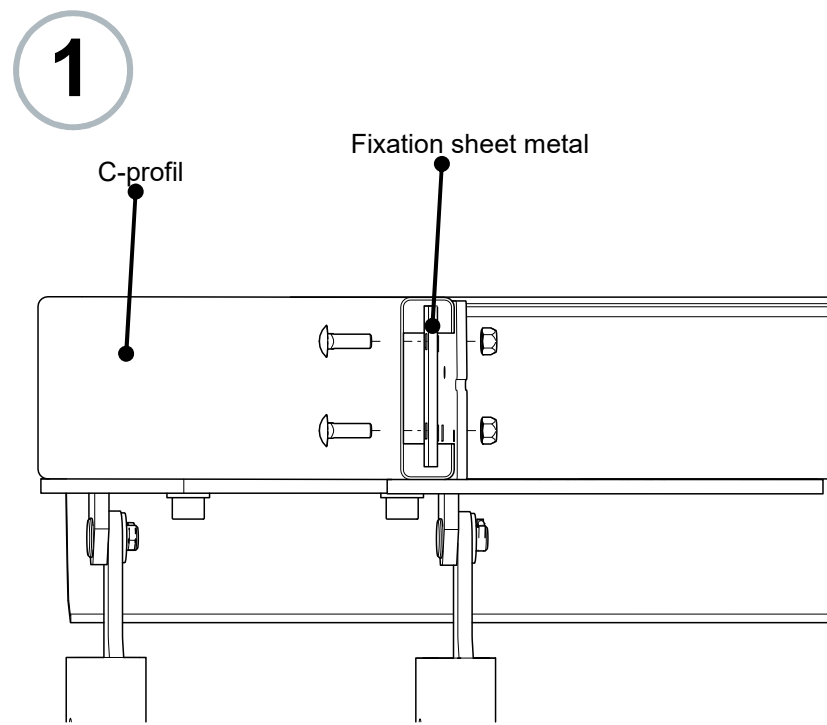
Torque 48 Nm

Mount all hinge stanchions and then fix them with the stopper for roof rails. The number of the hinge stanchions depends on the structural length.

Stopper for roof rails and hexagon screws are **part of the applicable top.**



## Mounting of C-profile



Round-head screw with square neck M8x25



Washer without chamfer



Hexagon nut with all-metal clamping element M8

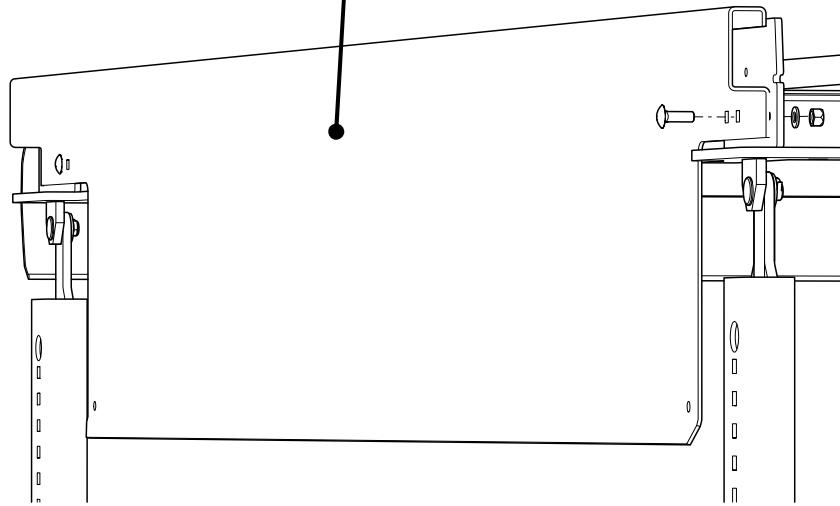
Round-head screws, washers, hexagon nut, C-profiles and fixation sheet metal **are part of the applicable assembly kit.**

For a better depiction, the outer rail and the sealing profile are masked out.

## Mounting of sealing sheet metal (only for tops with lifting device)

1

Sealing sheet metal



Round-head screw with square neck M8x25



Washer without chamfer



Hexagon nut with all-metal clamping element M8



Due to the needed turning function during the lifting process, it is **always required** to use the outer screw position.

Round-head screws, washers, hexagon nut and sealing sheet metal **are part of the applicable assembly kit.**

For a better depiction, the outer rail and the sealing profile are masked out.

# Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## Revision status

Revision status	Kind of change	Date	Name
00	New creation of mounting instruction	11 June 2019	Laib / Maier
01	Corrected tightening torques	29 September 2020	Boll
02	Page 4 changed	23.11.2020	Boll
03	Page 27, picture 1, screw from M12 to M14	11 January 2023	Laib

Erstellt	Geprüft und Freigegeben
Datum: Name/Abt. Unterschrift	Datum: 29.09.2020 Name/Abt. U.Boll
Dokument: FB45120A	