

Mounting instruction

Guard rail

acc. to EN 81-20





Safety advice

**The mounting may only be carried out by specialised persons*.
When mounting all corresponding safety regulations and the required safety measures for the mounting of lifts are to be considered.**

The mounting, disassembly and maintenance may only be carried out when the installation is switched off.

Keep the instructions on site for later use!

Intended use:

The guard rail is only appropriate for cars in closed lift shafts.

When choosing the guard rail the free distances according to EN 81-20 5.4.7.4 are to be considered:

- 0.70m height for distances between 0.30m and 0.50m (interior edge hand rail - shaft wall)
- 1.10m for distances beyond 0.50m (interior edge hand rail - shaft wall)
- 10cm distance between the outer edge of the hand rail and any parts in the shaft
- mounting at a maximum distance of 0.15m to the edge of the car roof
- maximum width of the guard rail: 1,30m

Scope of delivery

Please check the scope of delivery with the help of the parts list:

Art. no.	Guard rail EN 81-20:
078960	0,70m rigid
078961	1,10m rigid
078964	1,10m foldable 528
078965	1,10m foldable 578

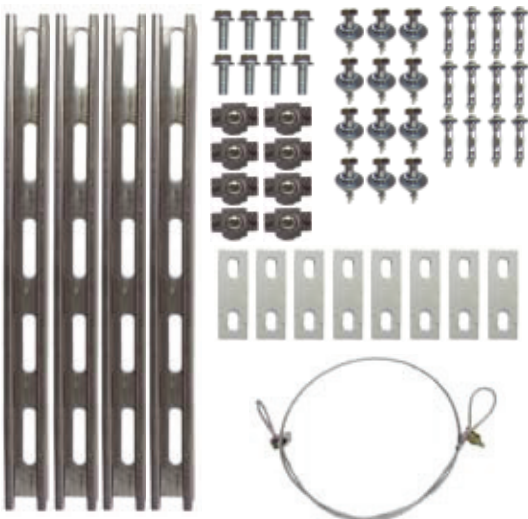
- 2 pcs. stakes
- 1 pc. hand rail 1.30m
- 1 pc. cross bar 1,30m
- 1 pc. foil bag with:
 - 8x self-locking screws M12x30
 - 8x self-locking nuts M12
 - 8x washers 13mm
 - 1x warning sign
 - 2x cable ties

Only with the foldable guard rail:

- 1 pc. foil bag switch package with:
 - 2x position switches PS14SC 1NO1NC
 - 2x control cables 4x1mm², 5m
 - 2x cylinder head screws M4x30
 - 2x self-locking nuts M4
 - 2x cylinder head screws M4x25

Art. no.
078966

Mounting kit



- 4 pcs. mounting rails 500mm

- 1 Stck. Foil bag with:
 - 8x self-locking nuts M12x30
 - 8x wing nuts M12
 - 8x flat bars 95x30
 - 12x hollow wall anchors
 - 12x wood screws 10x40
 - 12x serrated washers 10,5x18
 - 12x washers 10,5
 - 1x screw protection
 - 1x tensioning rope
 - 2x rope clamps
 - 2x cable ties

*Qualified person (corresponding to EN81-20):

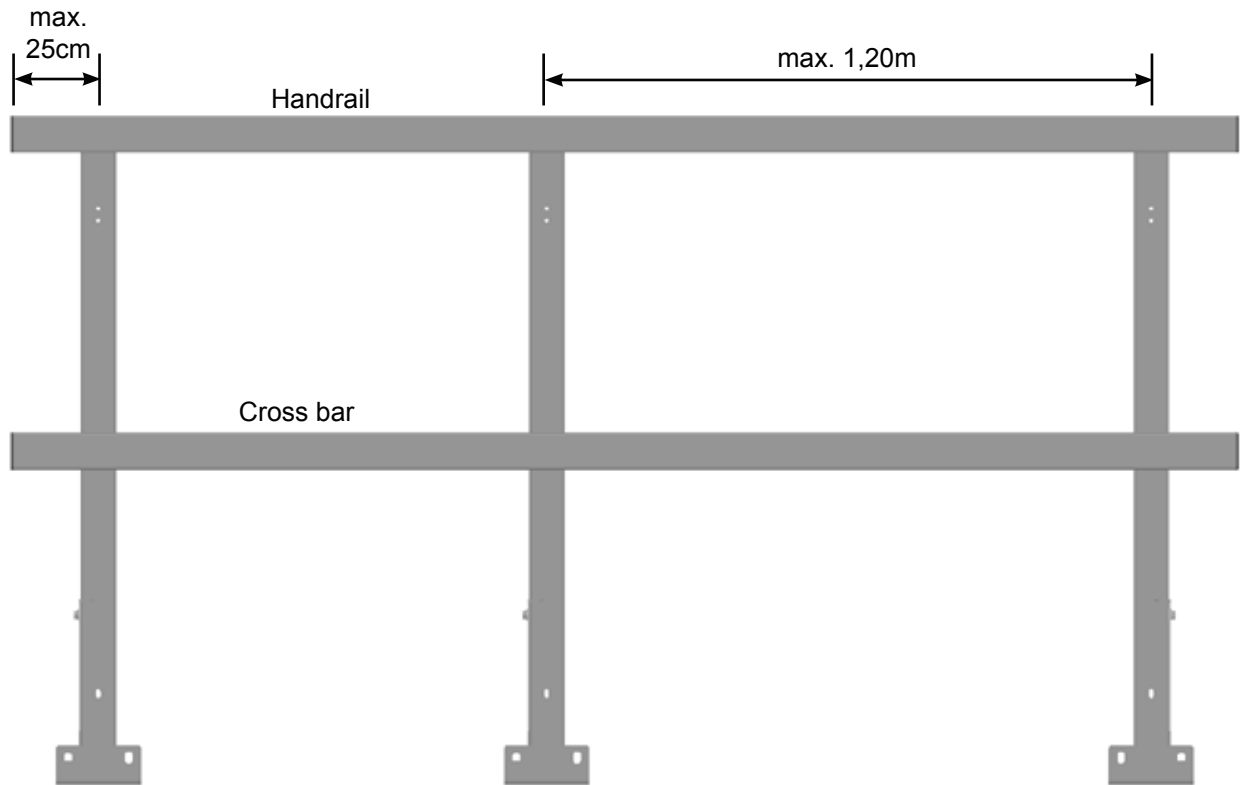
A person who has been trained accordingly and disposes of expertise based on knowledge and experience, and who is equipped with the necessary instructions to be able to safely effect the required maintenance or control of the lift, or the rescue of passengers.

Position of the stakes and guard rail length:

Generally, the stakes must be positioned as far as possible at the outer ends of the handrail or the cross bar. The handrail and the cross bar may protrude at most 25cm over the stake. The distance between two stakes must not exceed 1.20m.

The rigid guard rails can be extended as needed with the extension packages.

Handrail and cross bar may be shortened (with an angle grinder or iron saw) to obtain the correct length for the guard rail.



The illustration shows a guard rail basic package 110cm rigid (GP) with the extension (Art.no. 078961 + 078963)

Mounting:

1.0 Fixation at the car

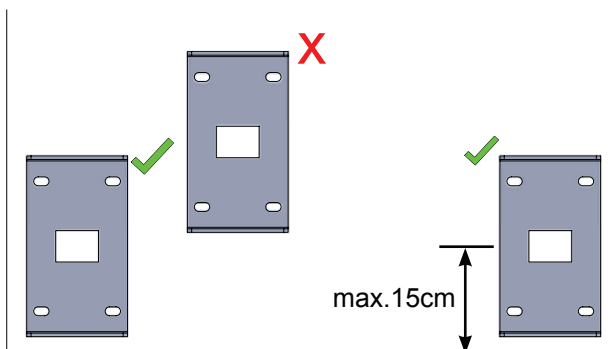
Depending on the local conditions the guard rail bases can be mounted on the car roofs in different ways.



Safety advice

Depending on the structure of the ceiling the mounting kit (Art.no. 078966) for guard rails has to be used additionally and other individual measures may be necessary. The correct fixation of the guard rail is incumbent on the user in all cases.

- An exact, parallel mounting of the guard rail bases is important especially for the foldable variants. Otherwise the guard rail cannot be folded correctly.
- The distance between the angles must not exceed the total width of the guard rail.
- Attention when drilling:
There may be power lines running in the ceiling, e.g. for the cabin illumination!



1.1.1 Direct screwing of the guard rail bases:

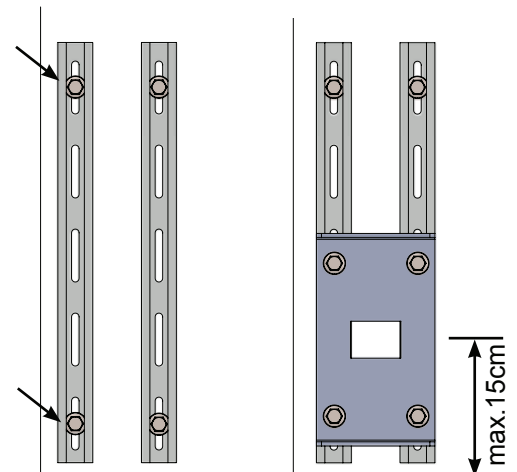
If the construction of the car roof is stable enough, the guard rail bases can be screwed directly to the roof using the delivered M12 self-locking screws and nuts. With the washers the surface between the nut and the car roof can be extended. Proceed to **point 2.0**.

1.2.2 Screwing the guard rail bases on the mounting kit 078966:

Depending on the structure of the ceiling the guard rail has to be screwed on the mounting kit with mounting rails. With this fixation method the mounting surface is extended, which is favourable for the power transmission to the car roof.

1.2.3 a) Mounting on a sheet metal car roof (with the mounting kit):

The mounting rails are placed parallelly on the edge of the car roof with the help of the guard rail bases and the positions for drilling are marked. After drilling the holes the rails can be screwed on the roof by means of the self-locking screws and nuts. With the washers the surface between the nut and the lower surface of the cabin ceiling can be extended. For a well-balanced force distribution one screw per rail has to be placed near the car roof edge and at least one more in the middle of the roof.

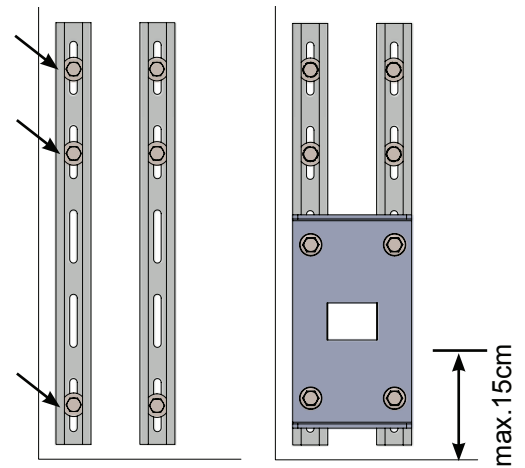


1.2.3 b) Mounting on a wooden cabin roof (with fixation kit):

The mounting rails are placed parallelly on the edge of the car roof with the help of the guard rail bases and the positions for drilling are marked.

After drilling the holes the rails can be screwed on the roof by means of the self-locking screws and nuts. With the washers the surface between the nut and the lower surface of the cabin ceiling can be extended.

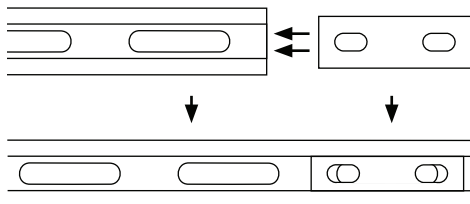
For a well-balanced force distribution one screw per rail has to be placed near the car roof edge and **two** more in the middle of the roof.



1.2.3 c) Mounting on a hollow ceiling made of sheet steel (with fixation kit):

In the case of prefabricated cabins that are inserted it can be difficult to find a suitable guard rail fixation. A fixation with hollow wall expansion anchors may be the best variant.

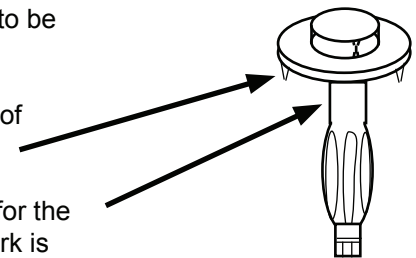
At first slide the flat irons into the mounting rails.



Important!

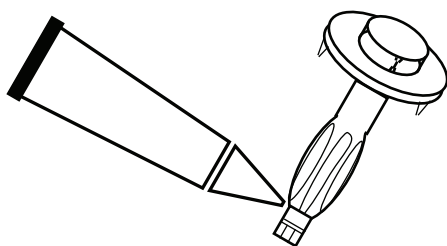
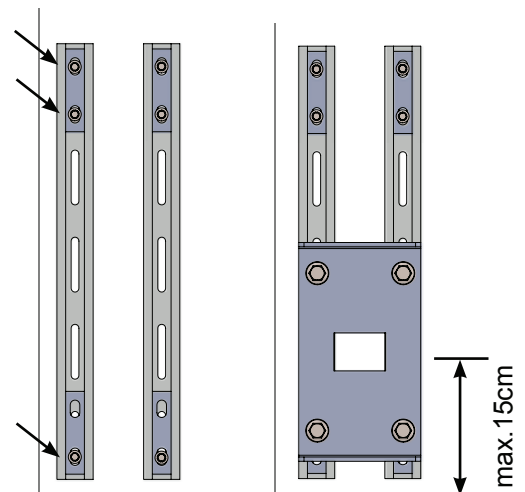
The flat irons always have to be inserted, so that:

- a) The hooks on the head of the hollow wall anchors get caught and spread
- b) The minimum distance for the expansion anchor to work is given



The mounting rails are placed parallelly on the edge of the car roof with the help of the guard rail bases and the positions for drilling are marked.

After drilling the holes the rails can be screwed on the roof by means of the hollow wall anchors and flat irons. For a well-balanced force distribution one hollow wall anchors per rail has to be placed near the car roof edge and **two** more in the middle of the roof.



Secure the nuts of the hollow wall anchors with a screw protection device to avoid a loosening of the lock nuts at a later time.

Caution when tightening the hollow wall anchors. They can be overwound when applying too much force.

2.0 Mounting of the stakes

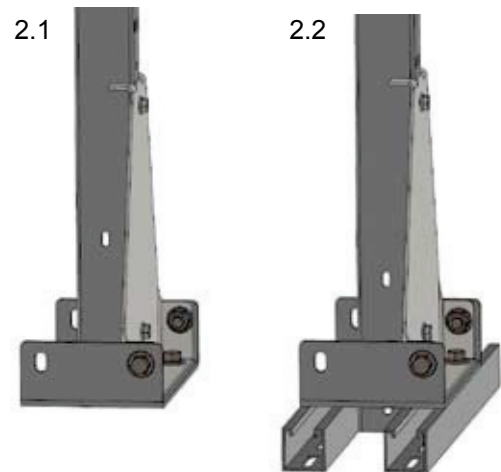
According to the fixation of the guard rail bases on the car roof (with or without mounting rails) the stakes can be screwed on at two different positions on the bases. Like that, the required total height of 1.10m can be observed.

2.1 Mounting of the stakes without mounting rails:

Fixation with two self-locking screws flush with the bottom side of the bases

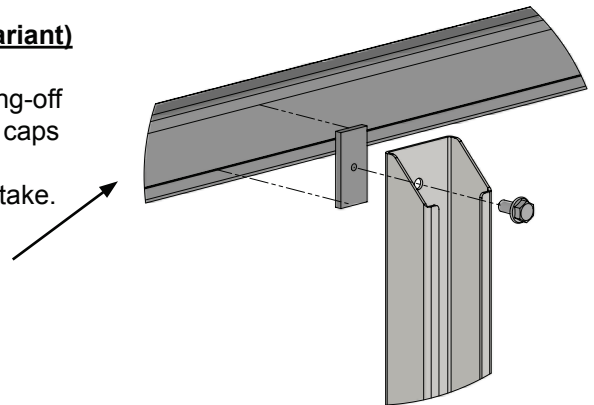
2.2 Mounting of the stakes with mounting rails:

Fixation with two self-locking screws engaged between the rails - flush with the car roof.



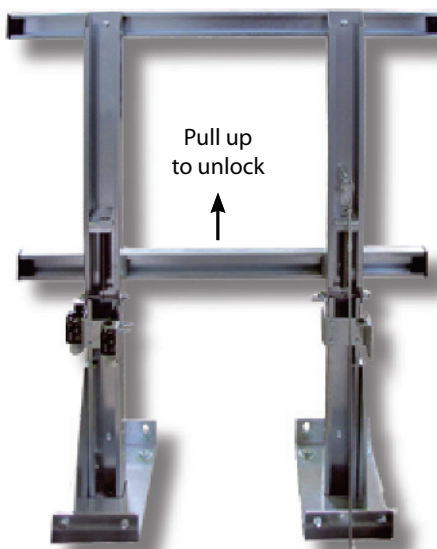
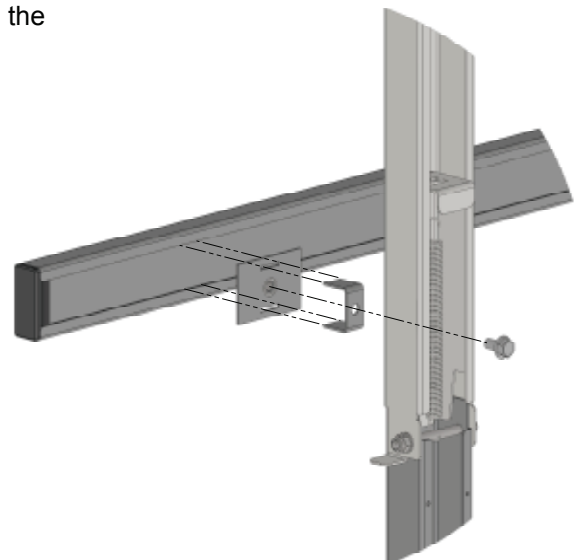
3.0 Mounting of the handrail (and the cross bar at the rigid variant)

Shorten the handrail and when required the cross bar with a cutting-off machine or a metal saw to the required measure and put the end caps back on. The two slide nuts have to be in the handrail. Screw the handrail and as the case may be the cross bar to the stake.



4.0 Mounting of the cross bar (only the foldable variant)

Shorten the cross bar with a cutting-off machine or a metal saw to the required measure and put the end caps back on. The two metal sheets with press nut have to be in the cross bar. Screw the cross bar to the stake.



Checking the folding mechanism:

Pull the cross bar up to unlock the two stakes. The guard rail can be hinged away.

When the guard rail is folded up, the locking mechanism has to snap automatically into place.

5.0 Mounting of the extension package (optional only for the rigid version)

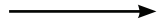
The rigid guard rails can be extended with an extension package. For this purpose the handrails or the cross bars are connected to each other by means of connecting elements.

5.1

First remove the corresponding end caps on the handrail and the cross bar.
If necessary, cut the handrail and the cross bar to the required length.

5.2

Put one sheet plate of 195x53mm into the handrail and one into the cross bar.



5.3

Put one press nut 195x53mm with screws into the handrail and one into the cross bar.



5.4

Connect the handrail and the cross bar of the basic package and the extension package with each other. Both ends have to be joined seamlessly.



6.0 Warning notices

Attach the warning sign with a cable tie at the guard rail.

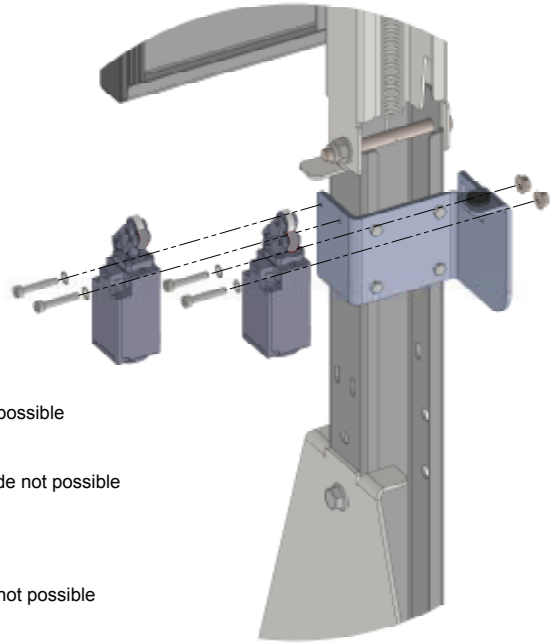
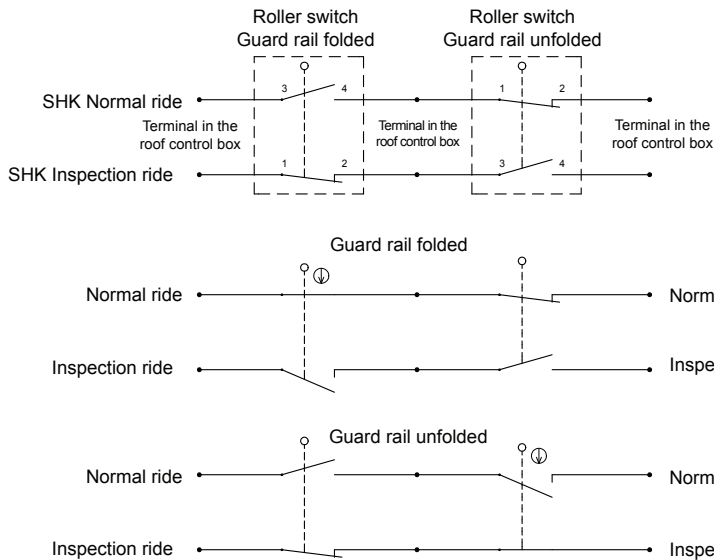


7.0 Monitoring switch (only foldable variant)

The switches monitor the end positions.

Mount both switches according to the illustration.

Wiring example in a safety circuit (SHK):



tragrahmen

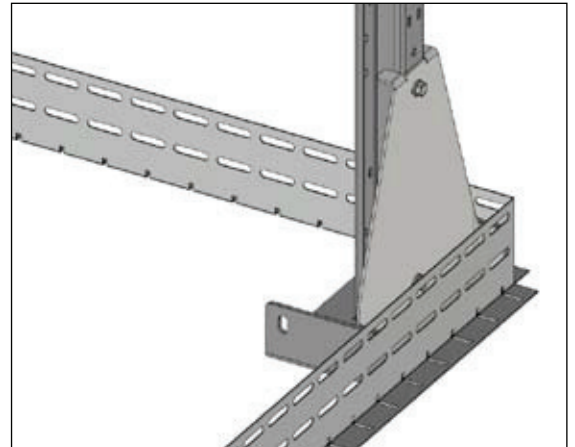
8.0 Tensioning rope (mounting kit)

The guard rail complies with the requirements of the EN 81-20 and does not have to be anchored additionally.

If a sufficiently stable anchorage on the car roof is not possible despite the use of the optional mounting kit, one guard rail stake can be anchored additionally with a wire rope at a stable point on the roof. It is recommendable to use parts of the supporting frame (e.g. the top cross beam).

9.0 Baseboard

For the comprehensive mounting of the guard rail according to EN 81-20 a 10cm high baseboard has to be fastened between the edge of the car roof and the guard rail (optionally available, W+W Art.no. 078967).



10.0 Final mechanical check

At the end check the safe fixation at the car roof and the stability of the guard rail!

11.0 Maintenance

After releasing the parachute and in an annual interval the safe and firm connection of the guard rail with the car roof and the stability of the guard rail have to be checked.

Manufacturer:

W+W Aufzugkomponenten GmbH u. Co.KG
Erkrather Straße 264-266
40233 Düsseldorf
Germany