

Mounting instruction

Universal finger and rope jump off protection

art.no.: 079828 - 079837



1. Contents

2 . Intended use.....	3
3. Safety advice.....	3
4. Parts list.....	4-5
5. Mounting preparation.....	5
6. Mounting advice and technical details.....	6
7. Mounting with vertical rope outgoing line.....	6-10
8. Mounting of the heightening bent.....	11-12
9. Mounting with inclined rope outgoing line.....	13-15
10. Mounting of broadening panels.....	15
11. Mounting examples.....	16
12. Mounting of the caution label.....	16
13. Maintenance advice.....	16
14. General advice.....	16

The structural component occurring in the assembly instruction has the following meaning:



The text and the pictures after the signal word ATTENTION contain important information, which must be considered absolutely, in order to prevent person or object damage.

2. Intended use:

The finger entering- and rope jump off guard is a product, which prevents the accidentally retraction of extremities in places, at which the ropes lie themselves on the traction sheave/ deflection sheave.



The guard must be installed in this way, that these places cannot be achieved accidentally with the upper extremities (especially the fingers).

If the traction sheave/deflection sheave has reinforcing struts, they must have a minimum distance of 25mm to the standing construction (e.g. engine frame) (acc. EN349). The guard may not impact the function of the system. The ropes may not grind at the guard. If the preceding demands cannot be fulfilled, a different suitable protection has to be installed.

3. Safety advice



The finger entering- and rope jump off guard are only suitable for traction sheaves and deflection sheaves in closed elevator engine rooms, which are allowed to enter only by authorized persons.



The mounting may only be carried out by specialised persons*. All appropriate safety regulations and the necessary safety precautions for the elevator assembly are to be considered.



The assembly, disassembly and maintenance may only be carried out with switched off system.



All data in the assembly instruction incl. the maintenance references on page 16 are to be kept absolutely.



Keep this assembly instruction for later use!

*Specialised 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.

4. parts list

number article

FuS vertical art.-no.: 79828-79830

- 1 part 1 left, mounting angle left
- 1 part 1 right, mounting angle right
- 1 part 2 left, reinforcing angle left for part 1 left
- 1 part 2 right, reinforcing angle right for part 1 right
- 2 part 4 suspension plate
- 2 part 6a protection plate
- 2 part 6b protection plate
- 1 small parts bag basic package

art.-no.	traction sheave diameter
79828	300-470mm
79829	480-720mm
79830	730-1100mm



FuS inclined art.-no.: 79831-79833

- 1 part 1 left, mounting angle left
- 1 part 1 right, mounting angle right
- 1 part 2 left, reinforcing angle left for part 1 left
- 1 part 2 right, reinforcing angle right for part 1 right
- 2 part 4 suspension plate
- 2 part 6a protection plate
- 2 part 6b protection plate
- 1 heightening bent (art.-no.: 79834)
- 1 small parts bag basic package
- 1 small parts bag heightening bent

art.-no.	traction sheave diameter
79831	300-470mm
79832	480-720mm
79833	730-1100mm



Heightening bent art.-no.: 79834

- 2 part 7 angle
- 2 part 8 extension plate
- 1 part 9 stability tube
- 1 small parts bag heightening bent

FuS Tv art.-no.: 79835-79837

- 2 part 6c broadening plate 1
- 2 part 6d broadening plate 2

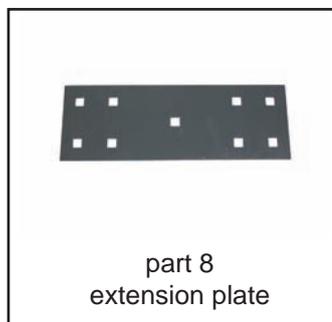
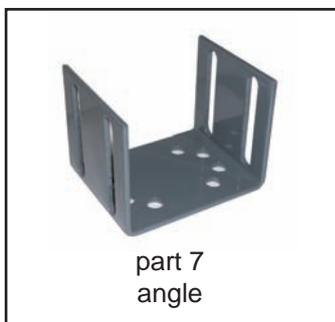
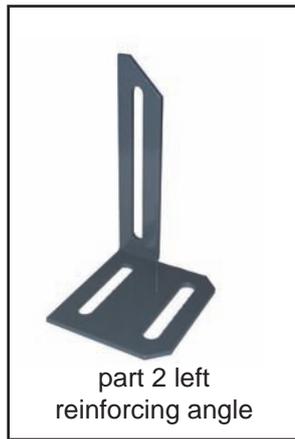
art.-no.	traction sheave diameter
79835	300-470mm
79836	480-720mm
79837	730-1100mm

Small parts bag basic package

- | | | | |
|----|-----------------------|---|--------------------------|
| 1 | spiral drill 3,5mm | 4 | 6KT-screws M10x40 |
| 1 | spiral drill 11,0mm | 4 | coach bolts M8x25 |
| 4 | 6KT-wooden screws | 8 | coach bolts M8x20 |
| 4 | dowels 12x60 | 4 | countersunk screws M8x25 |
| 4 | flat washers 10,5 | 4 | countersunk screws M8x16 |
| 4 | flat washers 8,4 | 2 | self-tapping screws |
| 4 | wedge washers | 2 | caution labels pictogram |
| 4 | self-locking nuts M10 | 1 | caution sign pictogram |
| 16 | self-locking nuts M8 | 1 | bore oil |

Small parts bag heightening bent

- 11 self-locking screws M10
- 1 coach bolts M10x140
- 10 coach bolts M10x25



5. Mounting preparation

Before beginning of the mounting please check the scope of delivery on the basis of the parts list for completeness.

As tools you need two 13er, one 15er and one 17er combination wrench. Also a 5mm inner hexagonal wrench and a hand drill is necessary. Metal drills (3,5mm and 11mm) are contained in delivery. If the mounting takes place on a concrete socle, a 12mm concrete drill is necessary.

6. Mounting advice and technical details

The finger entering- and rope jump off guard offer a multiplicity of mounting options. The pictures at the end of this instruction manual (page16) show only some mounting variants.

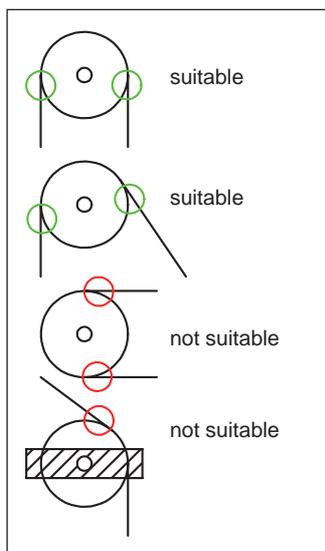
Please pay attention, that no new danger places develop. The position of the guard on the traction sheave / deflection sheave must correspond exactly to the assembly instruction. If this is not possible for local construction reasons, the guard must not be installed.

Please read this instruction manual before the assembly completely.

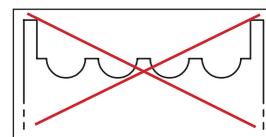
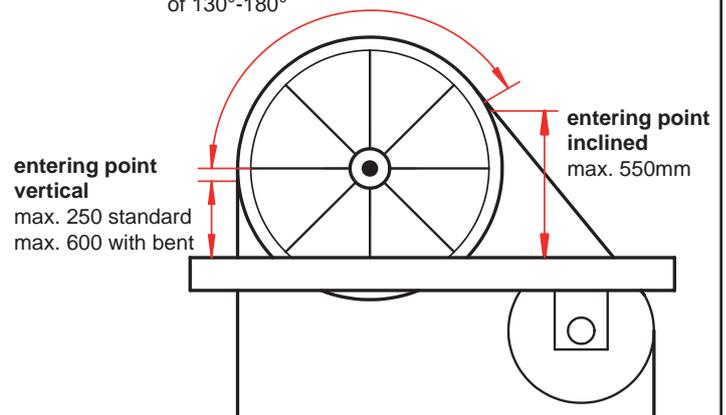
Width of traction sheave without broadening plates: til 154mm

Width of traction sheave with broadening plates: 155-218mm

Diagram for which entering points the guard is suitable.



suitable for:
rope enlacement angle
of 130°-180°



not suitable for
traction sheaves
with washer discs

7. Mounting with vertical outgoing rope

With mounting of the finger entering- and the rope jump off guard on a vertical rope outgoing line, usually no bent is necessary.

But the bent can be also mounted with a high rope outgoing line.

7.1

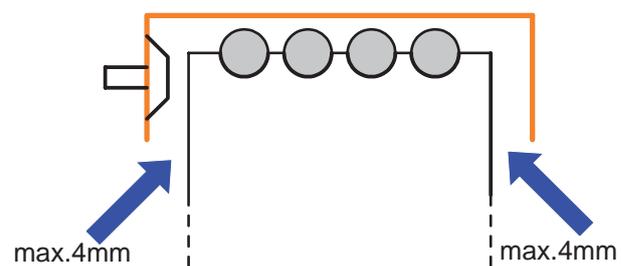


If the traction sheave / deflection sheave is smaller than 88mm, muss die vordere Schutzplatte (Teil 6a) have to be shortened with an angle grinder.

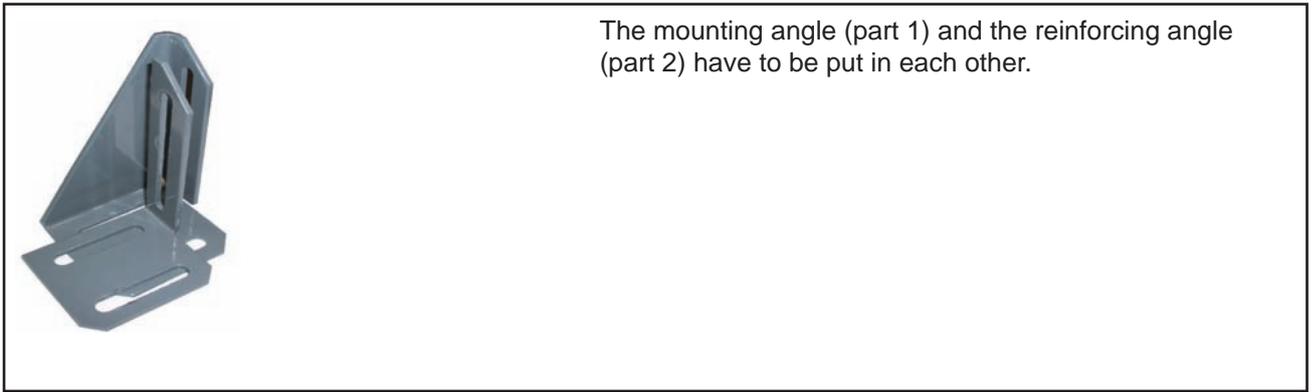
First the protection plates (part 6a+b) are screwed loosely with one another. For this the countersunk screws M8 x16 are used.

The correct width is adjusted by holding on at the traction sheave / deflection sheave.

The following distances may not be exceeded:



7.2



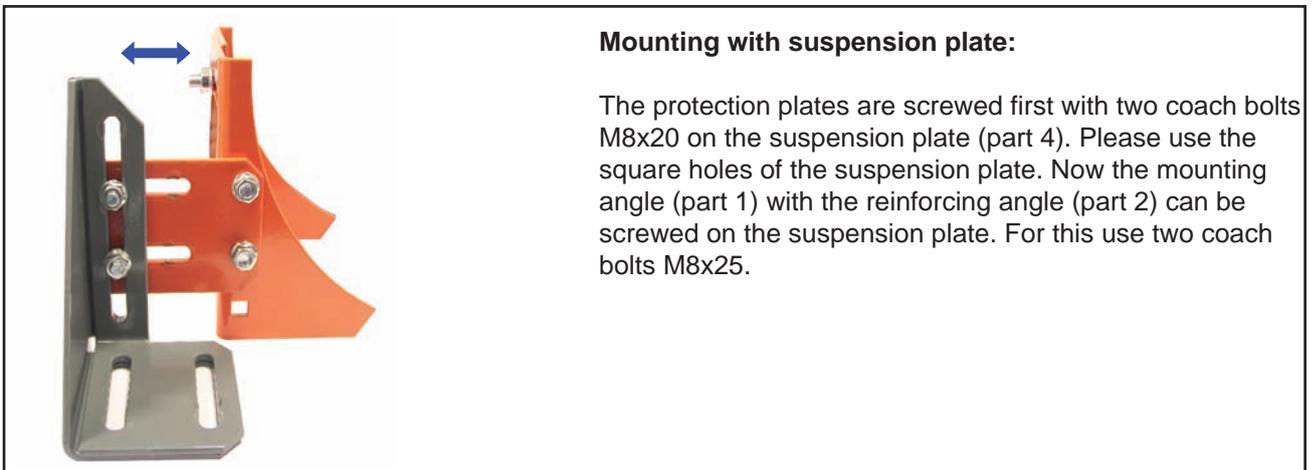
The mounting angle (part 1) and the reinforcing angle (part 2) have to be put in each other.

7.3

Because the distance of the ropes becomes larger with time, for protection by the entering of the ropes in the traction sheave, the suspension plate (part 4) has always also to be mounted. By the suspension plate an adaption of the guard is later possible.

If the finger entering- and the rope jump of guard are mounted on a deflection sheave, the suspension plate can be omitted, because here is no entering of the ropes.

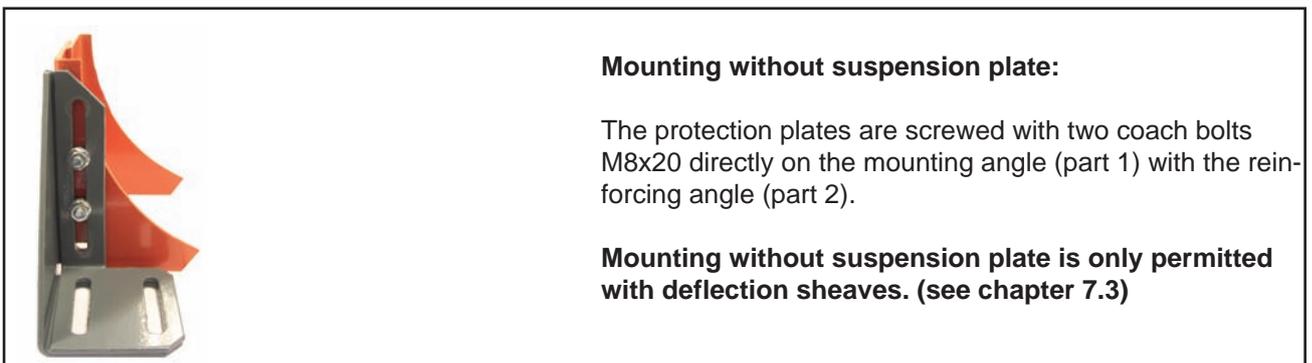
7.3.1



Mounting with suspension plate:

The protection plates are screwed first with two coach bolts M8x20 on the suspension plate (part 4). Please use the square holes of the suspension plate. Now the mounting angle (part 1) with the reinforcing angle (part 2) can be screwed on the suspension plate. For this use two coach bolts M8x25.

7.3.2



Mounting without suspension plate:

The protection plates are screwed with two coach bolts M8x20 directly on the mounting angle (part 1) with the reinforcing angle (part 2).

Mounting without suspension plate is only permitted with deflection sheaves. (see chapter 7.3)

7.3.3

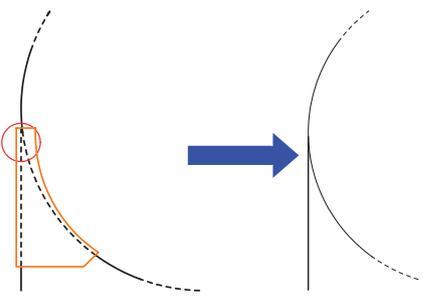


Attention!

Never exchange the angles, if the suspension plate is not also installed!

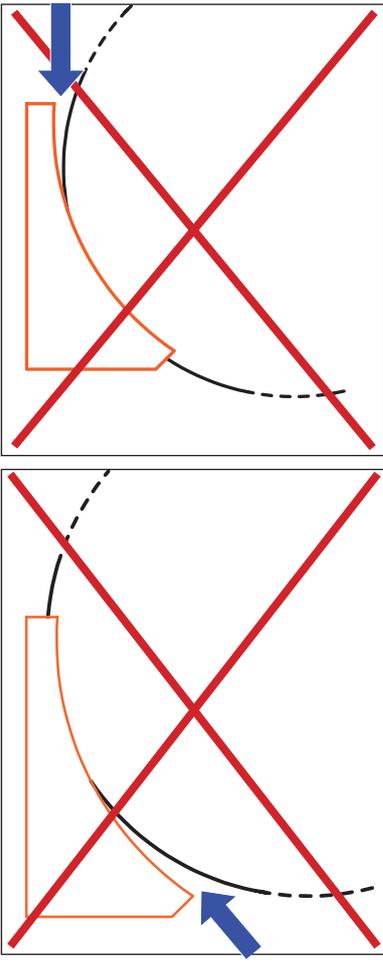
A new danger place develops!

7.4 Adjusting of the height



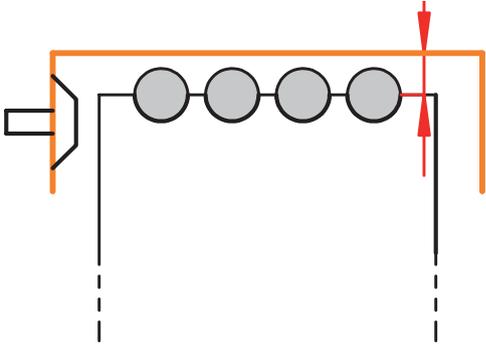
 **Attention!**

The danger place (point on which the ropes lie on the traction sheave / deflection sheave) must lie briefly underneath the upper edge of the guard.



 **Attention!**

During the adjustment pay attention that no dangerous places between the guard and the traction sheave / deflection sheave develop.



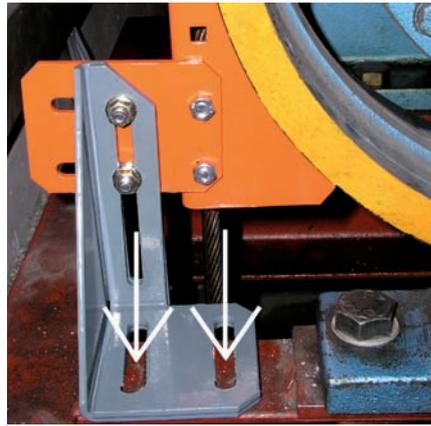
The protection must be installed as near as possible on the rope. (see chapter 7.3)

7.5 Fixing on the engine frame or on the concrete socle

For the fixing of the pre-mounted guard, two fixing variants are possible depending on the system. Variant 1 is for the mounting on the engine frame, variant 2 is for the fixing on a concrete socle. Both variants are contained in delivery.

Variant 1: Fixing on the engine frame

7.5.1



Hold the pre-mounted guard on the traction sheave / deflection sheave and mark one hole per long hole on the engine frame.

7.5.2



Pre-drill the holes first with the 3.5mm drill. Select if possible middle number of revolutions of the drill machine.

Then drill out the holes on 11mm.

The lowest number of revolutions of the machine is to be selected!
Cool the drill point with the enclosed bore oil sufficiently.

7.5.3



The angles are screwed with the engine frame. For this the hexagonal screws M10x40 are used.

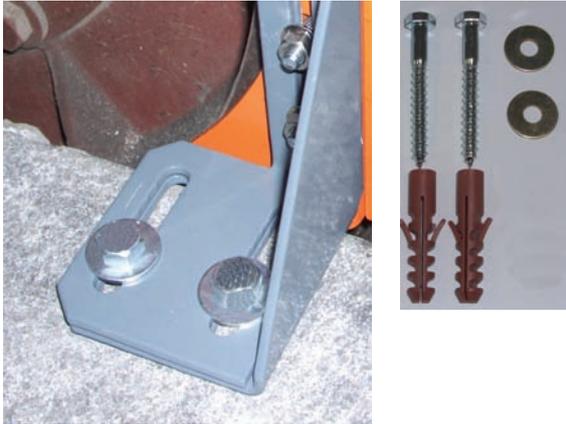
If the lower surface of the engine frame is inclined, the wedge washer M10 must be used.

7.6 Fixing variant 2: In concrete socle

7.6.1 Hold the pre-mounted guard on the traction sheave or deflection sheave and mark one hole per long hole on the concrete socle.

7.6.2 Drill 12mm holes in the socle.

7.6.3



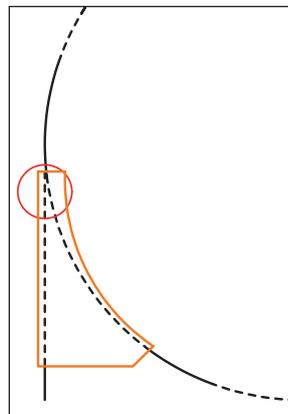
Use 12er dowels, 6KT-wooden screw, and flat washers 8,4 for the fixing.

7.7 I



At the end align the completely installed guard again and tighten all screws.

With the mounting height it is important, that the danger place (point on which the ropes lie on the traction sheave / deflection sheave) cannot be achieved with the upper extremities, especially with the fingers. The details for exact adjustment in chapter 7.4 are to be considered absolutely.



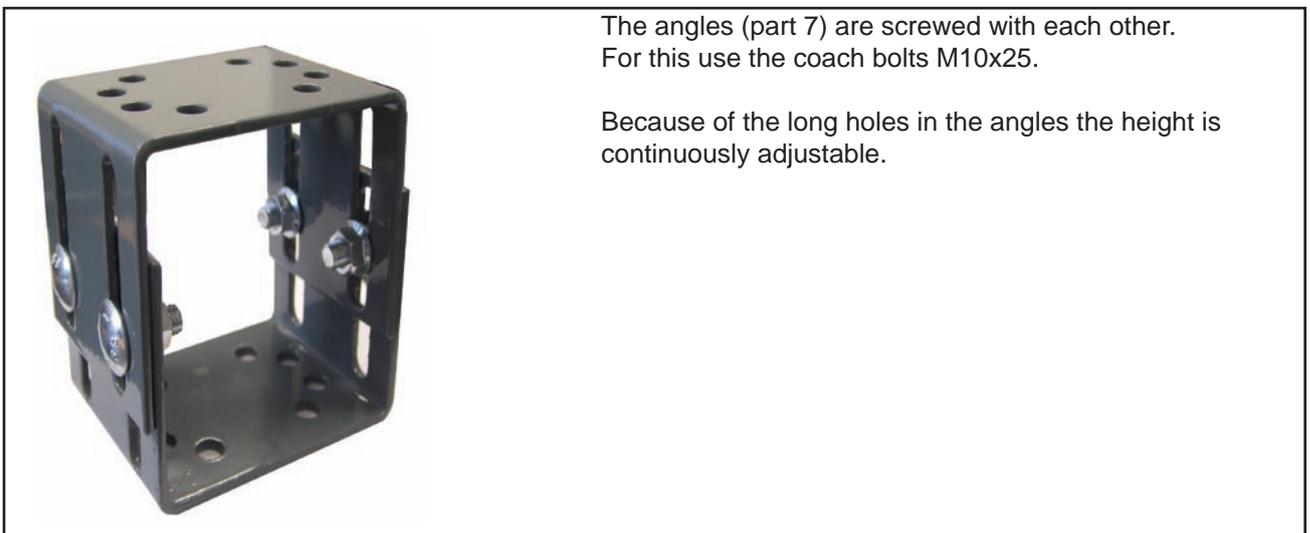
8. Mounting of the heightening bent

Because the inclined outgoing line lies usually higher than the vertical rope outgoing line, in most cases the heightening bent is necessary. If the inclined rope outgoing line can be covered without bent, then the mounting is carried out like the vertical rope outgoing line.

Thereby the mounting angle of the guard is adapted to the rope outgoing line by the suspension plate (part 4).

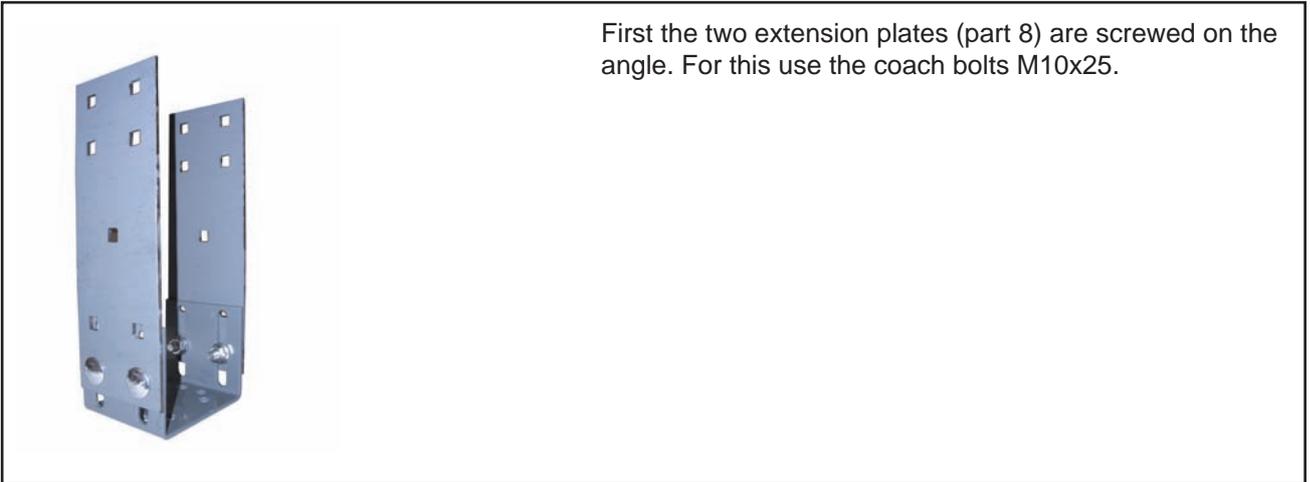
While mounting of the bent you have to check first, if the extension plates (part 8) and thus the stability tube are needed.

8.1 Mounting without extension plates

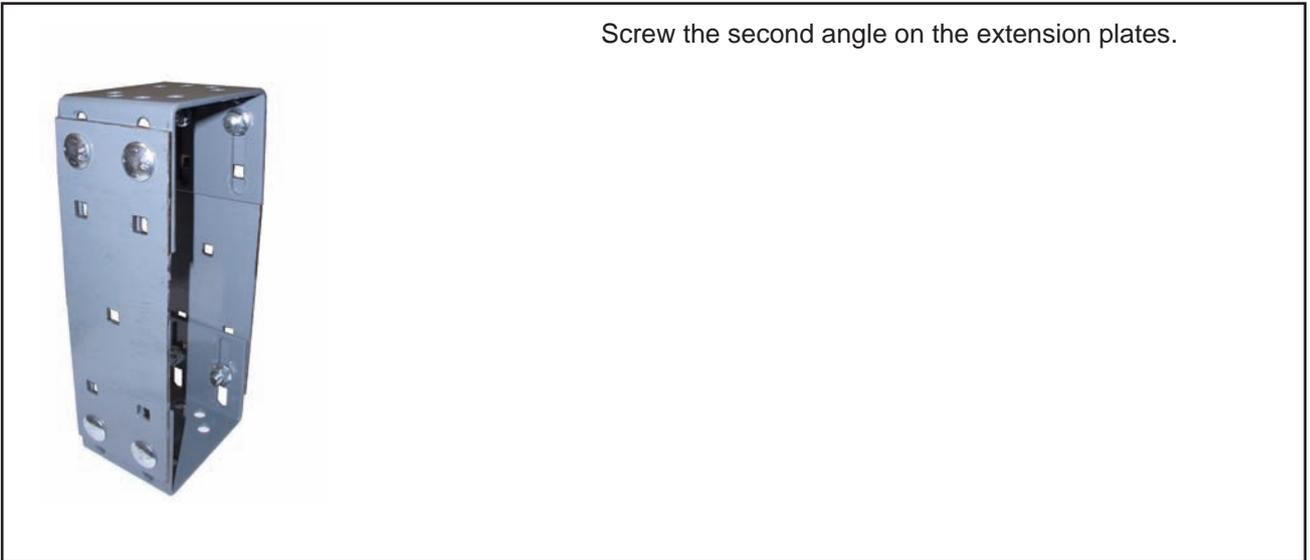


8.2 Mounting with extension plates

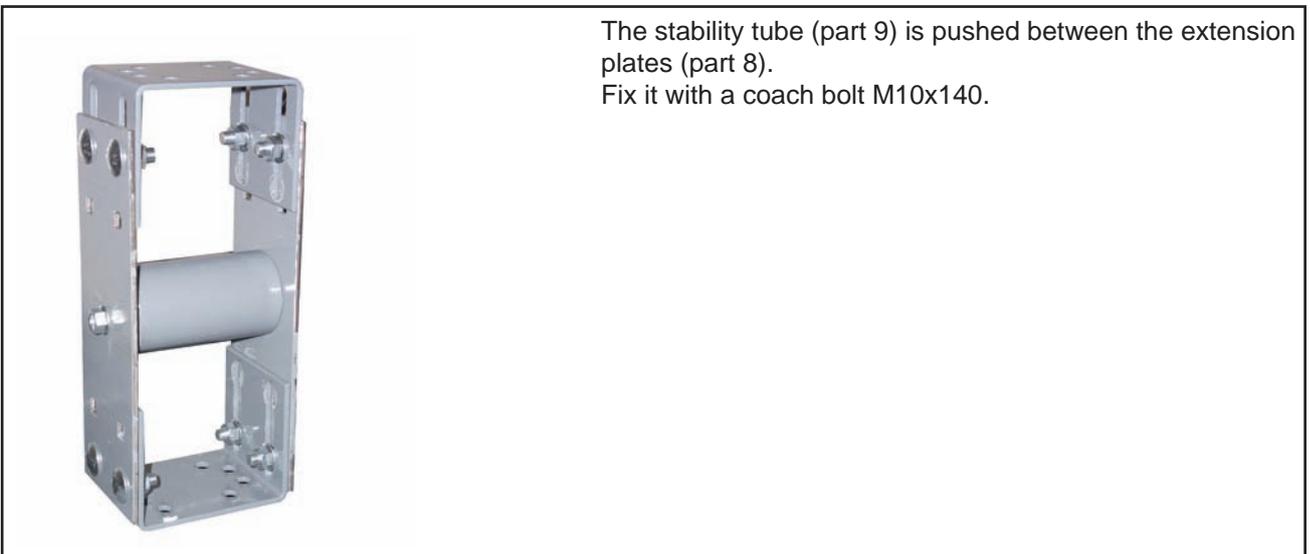
8.2.1



8.2.2



8.2.3



9. Mounting of the guard with inclined rope outgoing line

9.1

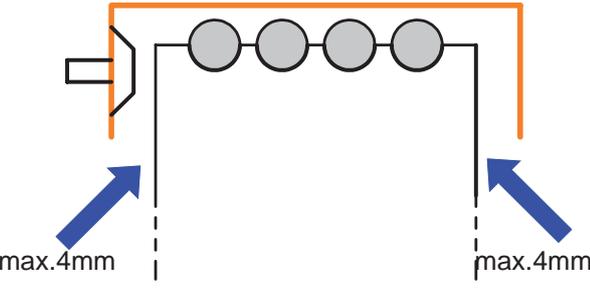


If the traction sheave / deflection sheave width is smaller than 88mm, the front protection plate (part 6a) has to be shortened with an angle grinder.

First the protection plates (part 6a+b) are screwed with each other loosely. For this the countersunk screws M8 x16 are used.

The correct width is adjusted by holding on at the traction sheave / deflection sheave.

The following distances may not be exceeded:



max.4mm

max.4mm

9.2



The mounting angle (part 1) and the reinforcing angle (part 2) have to be put in one another.

9.3



The protection plates are screwed first with two coach bolts M8x20 on the suspension plate (part 4). Please use the square holes of the suspension plate.

Now the assembly angle (part 1) with the reinforcing angle (part 2) can be screwed on the suspension plate. For this use two coach bolts M8x25.

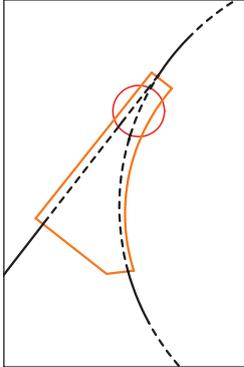
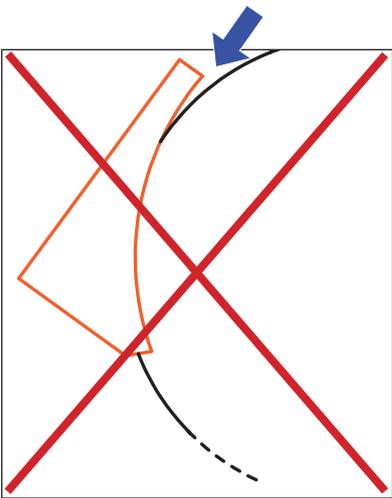
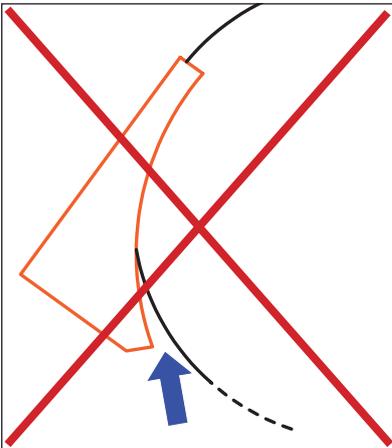
With the suspension plate (part 4) the guard can be adapted to the rope outgoing line.

9.4



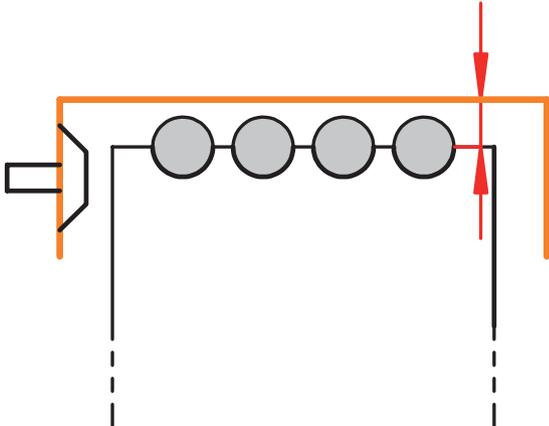
The guard is mounted on the bent and the height is adjusted. For the fixing on the bent use coach bolts (M10x25).

With the mounting height it is important, that the danger place (point on which the ropes lie on the traction sheave / deflection sheave) cannot be achieved with the upper extremities, especially with the fingers.

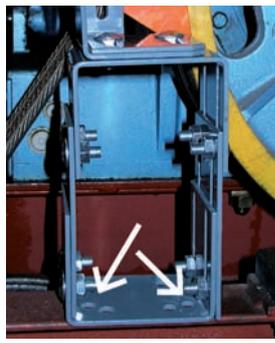
 **Attention!**

During the adjustment pay attention that no dangerous places between the guard and the traction sheave / deflection sheave develop.



The guard has to be installed as near as possible on the rope (see chapter 7.3).

9.5

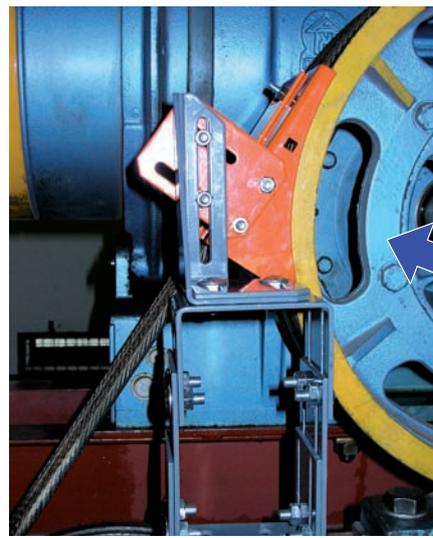


The guard is held on the rope outgoing line and the bore holes are marked.
The bent is fastened with two screws.

9.6

The drilling and fixing is carried out exactly as the vertical rope outgoing line.
Chapter 7.5 and 7.6. must be absolutely considered.

9.7



At the end align the completely installed guard again and tighten all screws.

With the mounting height it is important, that the danger place (point on which the ropes lie on the traction sheave / deflection sheave) cannot be achieved with the extremities, especially with the fingers. The details for exact adjustment in chapter 7.4 are to be considered absolutely.



Attach the label
"Attention!"

10. Mounting of the broadening plates



Variant 1 with traction sheave width of 155-190mm:

The broadening plates 1 and 2 (part 6c+d) are screwed with countersunk screws M8x25 on the protection plate (Teil 6a). Then the second protection plate (part 6b) is mounted with the extension plate 1 (part 6c). For this the coach bolts M8x20 are used.



Variant 2 with traction sheave width of 191-218mm

The both protection plates (part 6a+b) are connected with the extension plate 1 (part 6c). For this the countersunk screws M8x16 and the coach bolts M8x20 are used.

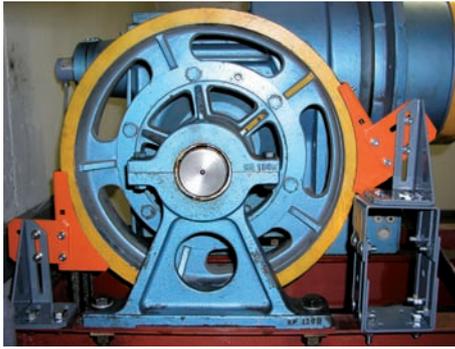


Attention!

picture 1: Distance between guard and traction sheave is too large

picture 2: Width over 218mm are not permissible for stability reasons.

11. Mounting examples



12. Mounting of the caution label



The caution label has to be fixed well visible near the traction sheave / deflection sheave, e.g. on the engine frame or on the bearing bent (see picture).

The fixing has to take place in such a way that the label cannot peel off. For this we recommend to use the enclosed tapping screws.

13. Maintenance advice

With the finger entering- and the rope outgoing line guard the stability of the screw connections must be checked once a year or after every catching test.

If hard knocks or vibrations on the machine result constantly for example from lift truck operation in the car or other imponderabilities, briefer maintenance intervals could be necessary.

It is also possible, that vibration frequencies occur, for example because of machine unbalance, which unfix the screw connections. The determination and responsibility for a reasonable time maintenance distance is incumbent on the operator. With the maintenance of the finger entering and rope outgoing line guard the distances (which are given in this instruction) between guard and traction sheave / deflection sheave have to be controlled and if necessary adjusted again.

14. General advice

Expert's reports can be downloaded from our web site www.wwlift.de