

Disk-10A / Disk-10A-W

Shaft information by absolute encoder with knobbed belt Installation instructions

Status: 1.2.2022

Disk-10A (screwed down with extension bracket)



Disk-10A (screwed down directly)



Disk-10A-W (with an extension, for lifts with rails located at the back of the car)



STRACK
LIFT AUTOMATION

Keep these installation instructions available even after commissioning.

These instructions apply when an additional assembly drawing for the particular lift installation is not available. Strictly observe the respective safety regulations and take the necessary safety measures upon lift installation. The installation of the system shall be carried out by professional lift fitters only.

Tools for installation:	2 spanners each for 19, 18, 10 and 8 mm or 1 spanner and 1 ring spanner 1 screw driver, medium size 1 folding rule 1 hand drilling machine with bit for metal drilling 6.5 mm
Accessories, not incl. in supply:	If required: cable duct, dowels, screws for mounting of encoder cable. If required: anchor plugs for wall mounting if mounting to guide rail is not possible



Safety notes

1. The knobbed belt system shall not be put into operation without the pulley-protection
2. In case of replacement, the encoder pulley shall be removed from the encoder with extreme caution only. Inappropriate removing of the pulley will destroy the encoder.
3. The absolute encoder is a measuring instrument: DO NOT drop it, DO NOT hit it, DO NOT spray it with liquids; degree of protection IP54
4. Keep the protective cap on the connection plug during installation
5. Pay attention to correct pre-tensioning of the spring
6. Pay attention to exact vertical mounting of the encoder pulley and the deflection pulley

Description of the installation

In case of large travel heights, installation has to be carried out by two persons. Only professional lift fitters shall install the equipment.

Below, mounting to the car guide rail is described. Optionally it is also possible to fix the mechanical parts to the shaft wall by means of anchor plugs. For that, additional anchor plugs and appropriate screws are required which are not included in the standard supply.

Standing on the car roof, travel into the headroom, press emergency stop and mount the first extension bracket (see detail drawing further back) as highly as possible in the headroom. In case of an overhead machine room, the absolute encoder with plate must be mounted to it, in case of a machine room located at the bottom the diverting pulley with plate must be mounted to it. Fix the encoder or deflector pulley plate to the extension bracket according to the drawing and corresponding to the local conditions. Pay attention that suspension cables, safety gear, overspeed governor, car terminal box or other add-on pieces do not interfere with the system in this sector. Furthermore, pay attention to exact vertical installation of all fixing plates.

Let one half of the knobbed belt down to the shaft pit. In order to simplify mounting, the end of the belt can be loaded with a ring spanner, for instance, before letting it down. When the knobbed belt has arrived in the shaft pit, open the pulley-protection, put the belt round the pulley and arrest the belt and the pulley provisionally by using a binder. Tighten the screws of the pulley-protection again!

Let the other end of the belt down into the shaft. When the entire belt is let down, remove the binder.

Standing on the car roof, travel down slowly, sliding your fingers along both parts of the knobbed belt in order to make sure that they are not twisted. Travel to the lowest stop point. Pay attention, however, that the shaft pit remains accessible. Press emergency stop.

One fitter stays on the car, still holding the knobbed belt. As an alternative, the knobbed belt can be provisionally arrested at the car by using a binder. The other fitter gets off into the shaft pit for mounting. Before entering, observe the respective safety regulations.

In the shaft pit, first mount the second extension bracket according to the detail drawing (see further back). Pay attention to mounting the bracket in such a way that it is in line with the encoder mounted in the headroom. The bracket must be mounted at such a low point that the system will not be damaged when the car lands on the buffers.

Fix the encoder or deflector pulley plate according to the drawing.

Mount the spring according to the drawing. Subsequently, put the knobbled belt round the pulley and tense the spring by moving the extension bracket.

Important! Mind the correct spring tension:



280 mm $\pm$ 10 mm, measured w/o ears

Note: The spring was modified. The specified spring tension exclusively refers to the new spring with an outside diameter of 24 mm!

This corresponds to a tensile force of about 8 kg (78 N)

Now, the knobbled belt has to be connected with the car as per drawing. Possibly, holes with 6.5 mm diameter have to be drilled for the fixation to the car sling, to the car roof or under the car floor. If between car and sling large buffers are installed, and the lift control consists of the function "re-levelling", installation should be made at the car roof or under the car floor. In all other cases mount the fixation at the sling.

i Important! When the encoder is mounted in the shaft headroom, the spring has to be arranged **under** the fixation to the car. When the encoder is mounted in the shaft pit, the spring has to be arranged **above** the fixation to the car.

i Important! The side of the belt which is mounted to the car, has to be straight down. The other side may run slope (see picture assembly survey).

i Important! Check again whether the belt runs smoothly on the pulleys, even when top landing or bottom landing has been overshoot, and that it is not obstructed by, for instance, tensioning spring or belt fixation.

i Important! When the installation is completed, check again the exact spring tension. When it is too weak, the belt may jump over the knobs, if it is too strong, the operational life of encoder, pulleys and belt may be reduced.

Maintenance instructions

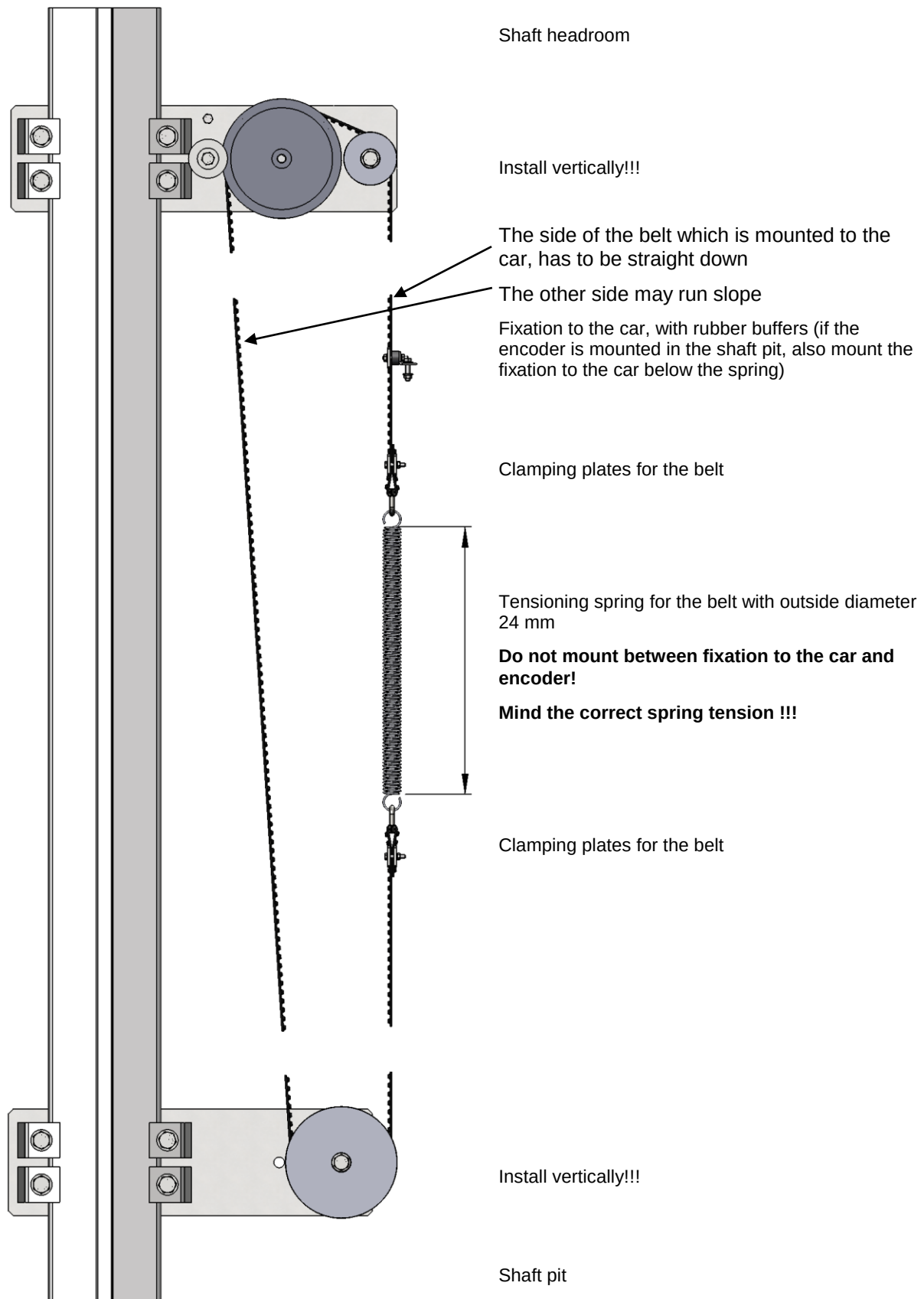
Do not use grease, oil or French chalk!

The system and the knobbled belts are maintenance-free.

For reasons of safety, the exact spring tension should be examined once a year.

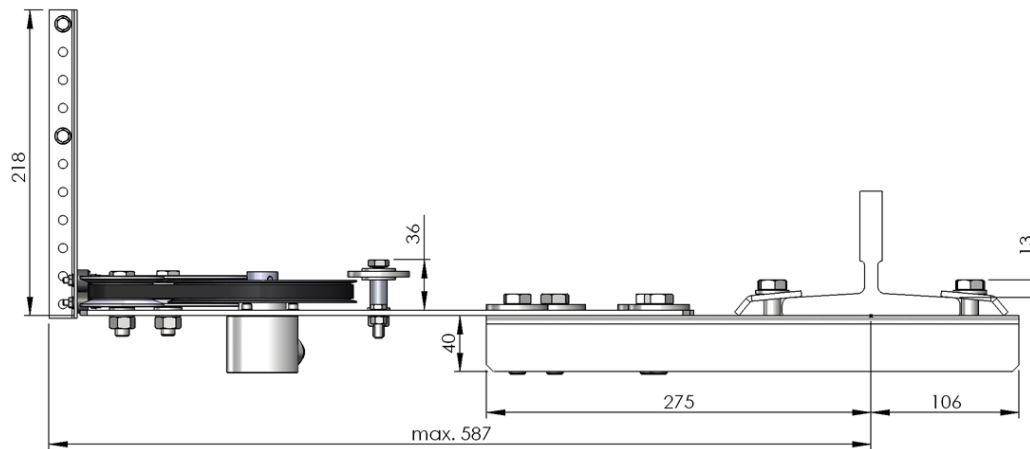
When the limit of the operational life of the belt is reached, belt, encoder pulley and deflector pulley have to be replaced at the same time. Be particularly careful when replacing the pulleys (do not hit, for instance).

Mounting overview

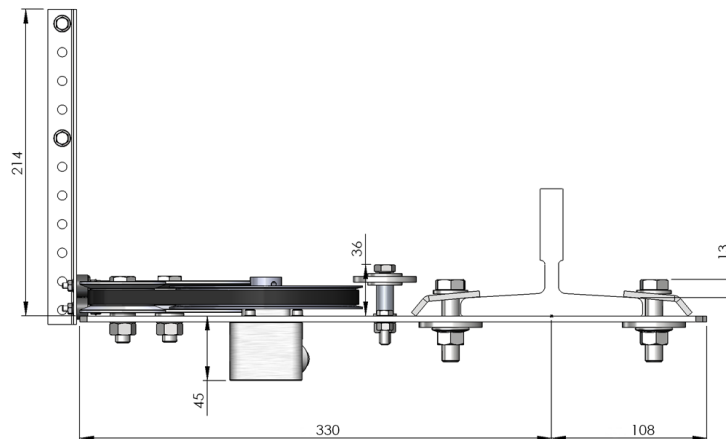


Mounting dimensions

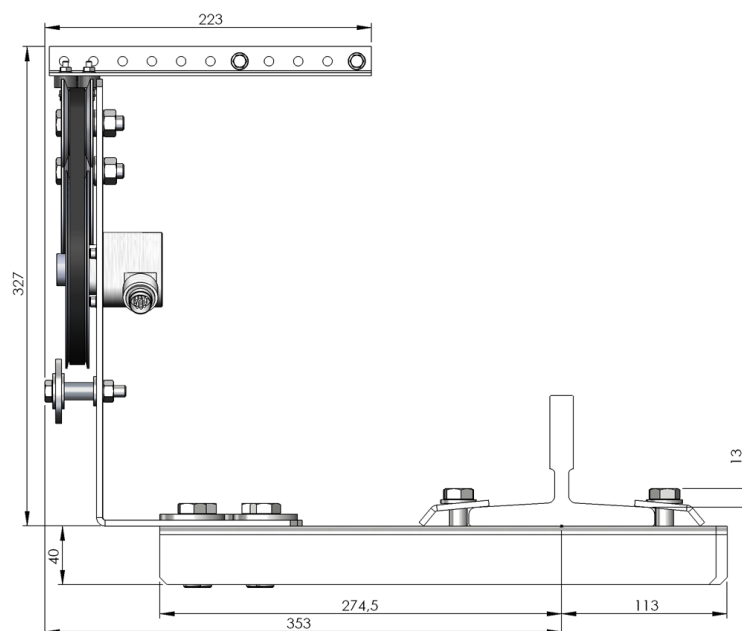
Disk-10A (screwed down with extension bracket)



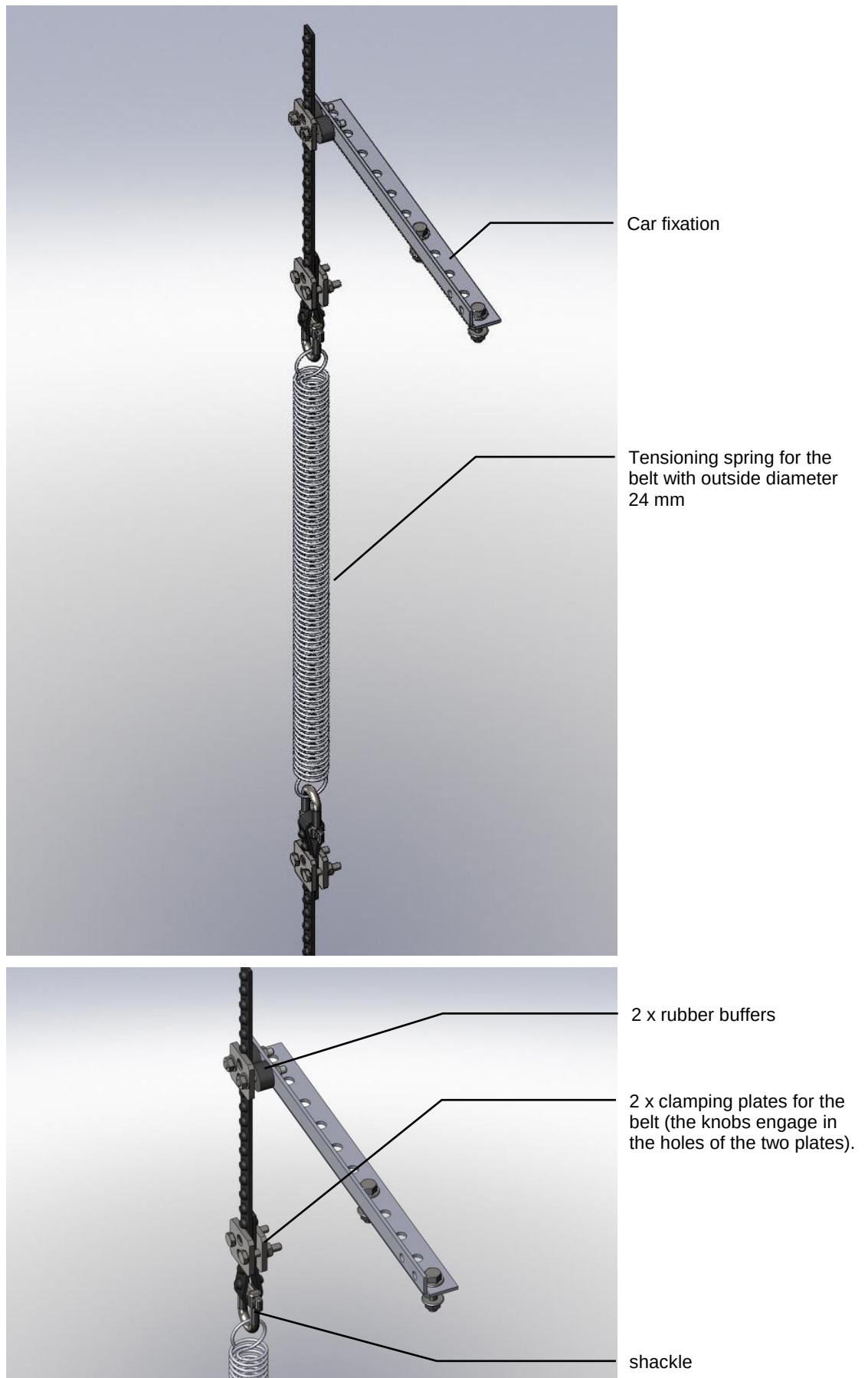
Disk-10A (screwed down directly)



Disk-10A-W (for lifts with rails located at the back of the car)



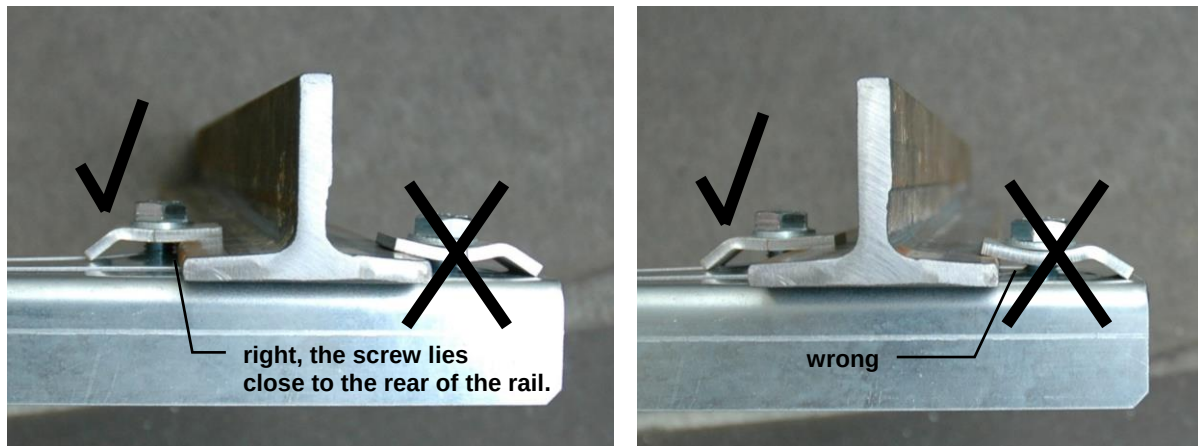
Detail of car and spring fixation



How to mount the clamping plates for the rail correctly

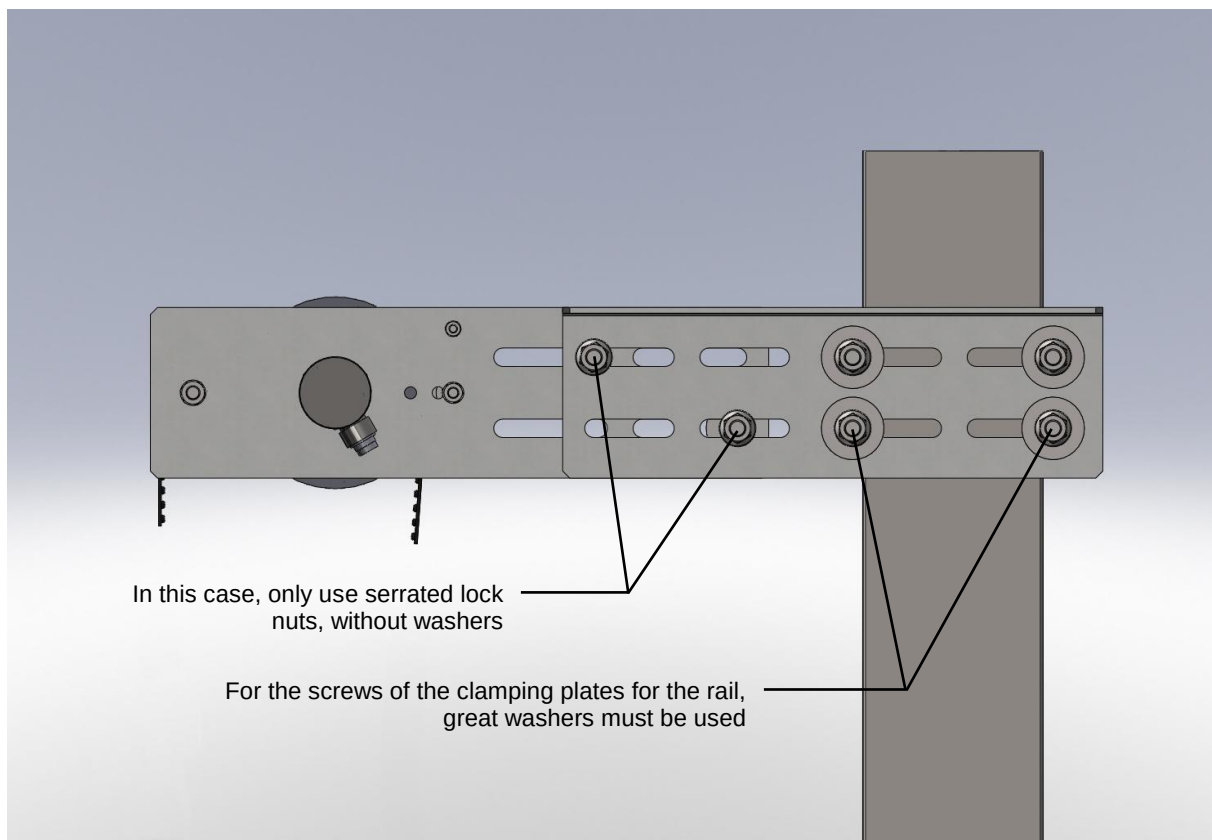
Push the screws of the clamping plates for the rail close to the rear of the car rail in order to prevent the clamping plates from caving in extremely and the entire system from twisting.

Top view



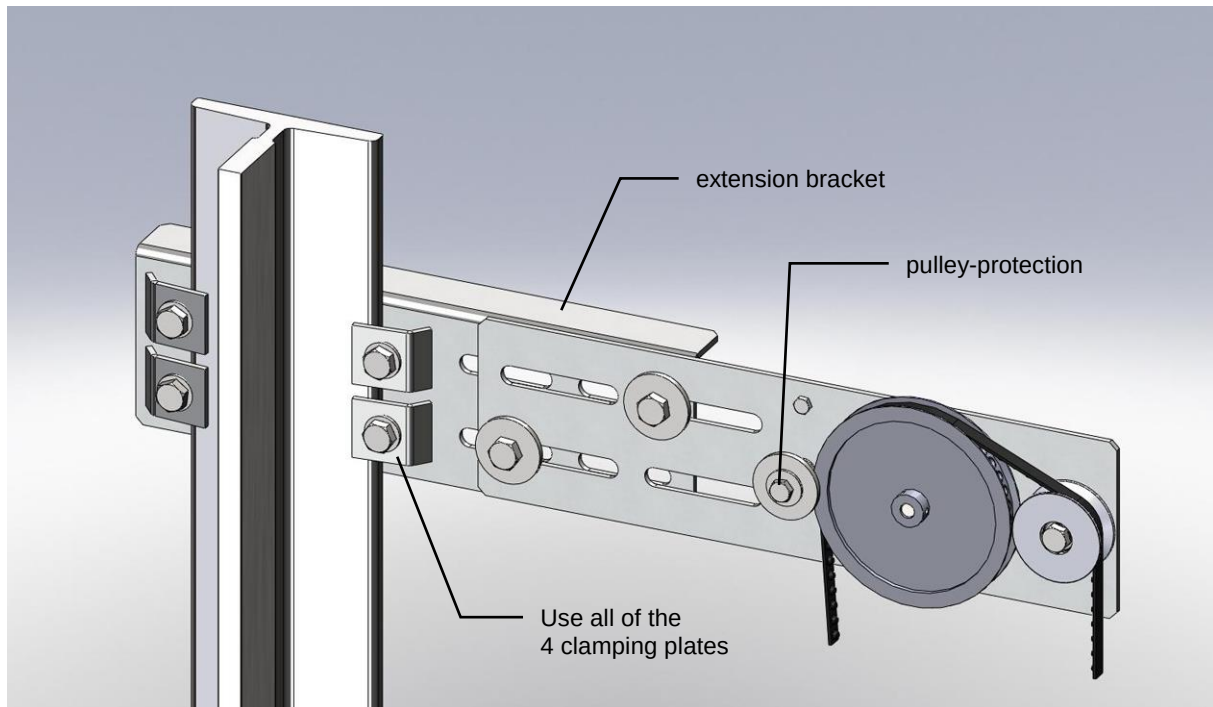
At the rear, always use great washers for the clamping plates for the rail.

Rear view

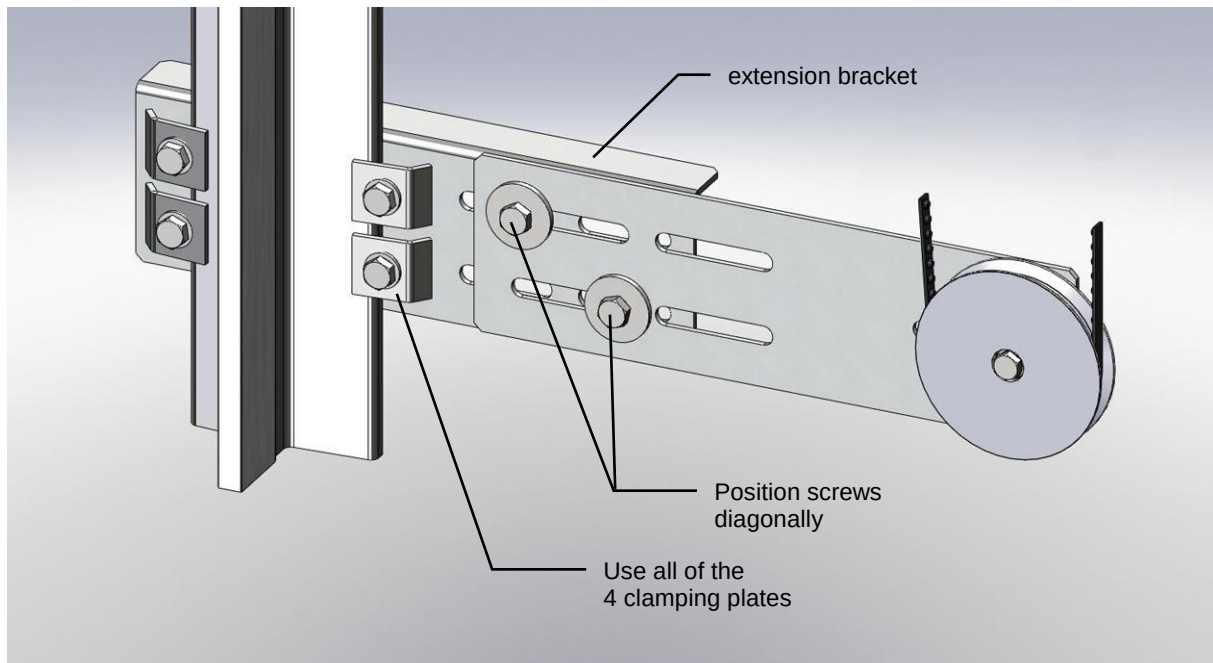


Detail of Disk-10A encoder and deflector pulley

...screwed down to the car rail with extension brackets

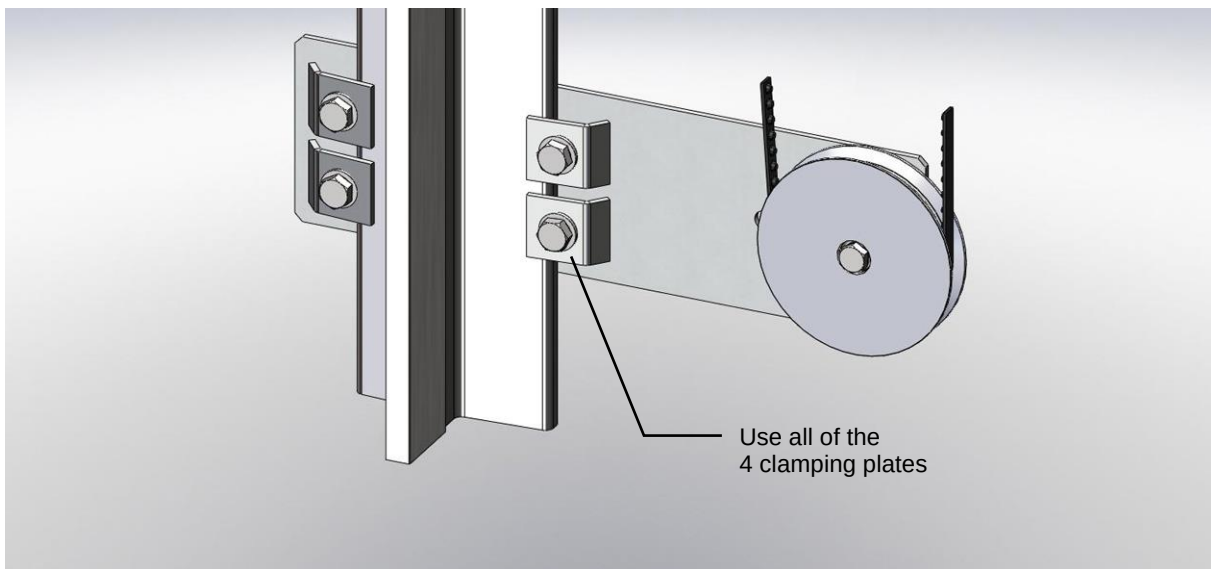
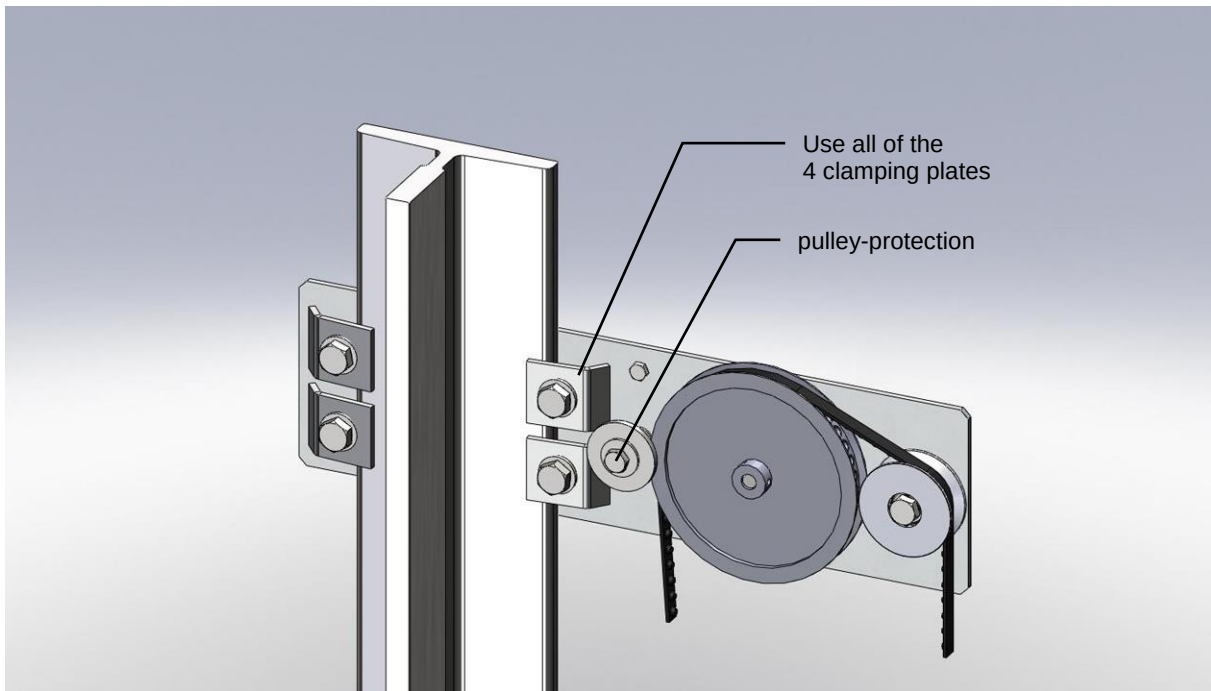


Compensation of level differences: several large shims may be put between the extension bracket and the encoder plate either as a whole or partially.



...screwed down to the car rail directly

In case of cramped conditions the encoder plate can also be screwed directly to the car guide rail.



Detail of Disk-10A-W encoder and deflector pulley

