D-105162 / Rev. 0 / 07.02.2020
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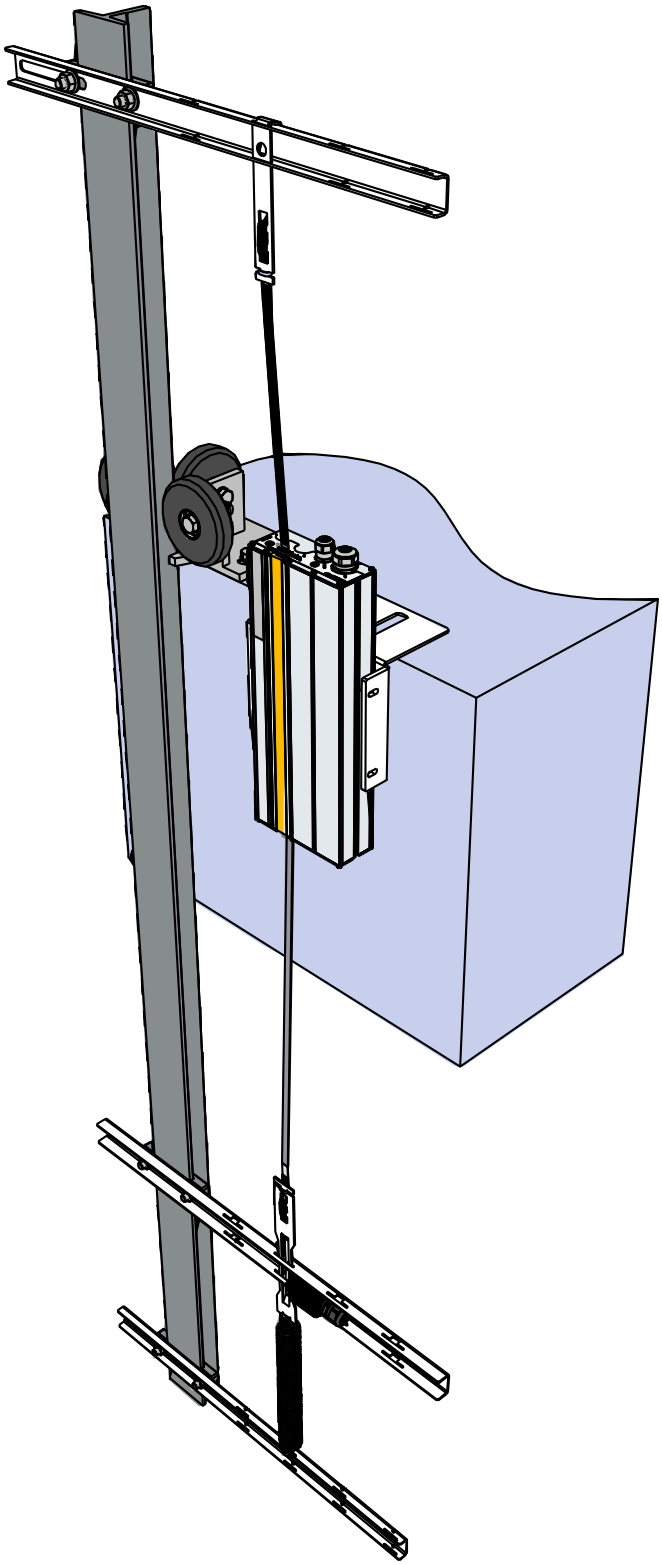
Mounting Instructions

LIMAX33CP with Installation Kit and Tape Detection

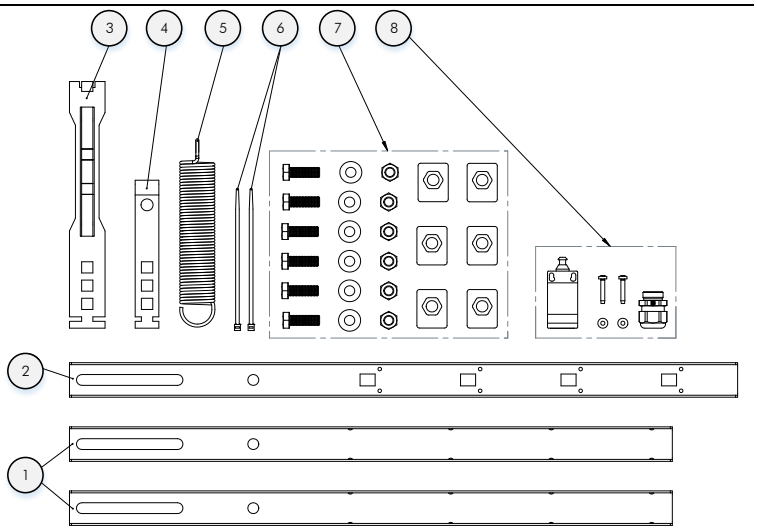
LIMAX33CP with S-RMS2



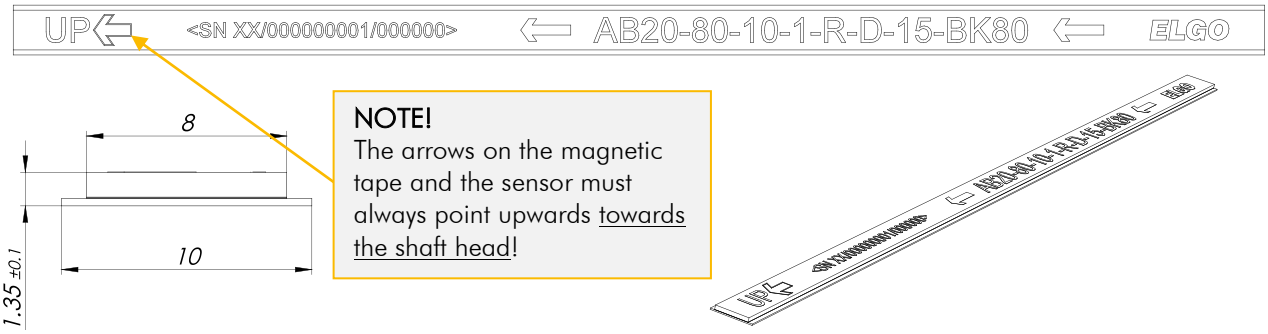
1 Contents

2 Kit Components

Kit Components	
1	Crossbeam (2x)
2	Crossbeam for safety position detector (1x)
3	Tape fixture for position detector (1x)
4	Tape fixture (1x)
5	Spring (1x)
6	Cable ties (2x)
7	Rail clips including screws and nuts (6x)
8	Position detector including screws and cable gland (1x)
	Original description of position detector
9	Magnetic Tape AB20-80-10-1-R-D-15-BK80
10	LIMAX33 CP
11	LIMAX33 CP Mounting angle set

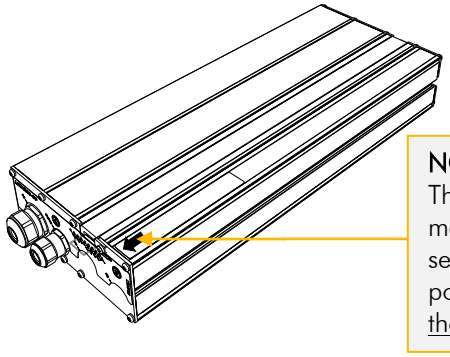


9 Magnetic Tape AB20-80-10-1-R-D-15-BK80



NOTE!
The arrows on the magnetic tape and the sensor must always point upwards towards the shaft head!

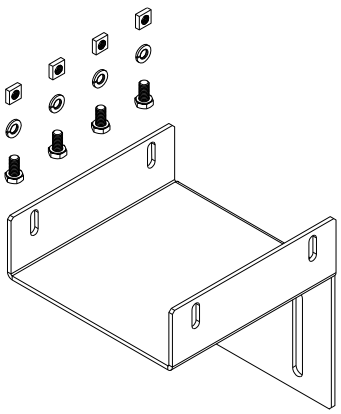
10 LIMAX33 CP



NOTE!
The arrows on the magnetic tape and the sensor must always point upwards towards the shaft head!

11 LIMAX33 CP Mounting Angle

Mounting angle for LIMAX33 CP with four each of screws, nuts and washers for mounting the sensor.



3 About this Document

3.1 Function

E

These mounting instructions provide all the information you need for mounting, commissioning, the safe operation and disassembly of the LIMAX S-RMS. The mounting instructions must be available in a legible condition and complete version in the vicinity of the device.

3.2 Target Group: Authorized Qualified Personnel

E

All operations described in these mounting instructions must be carried out only by trained specialist personnel, authorized by the plant operator.

Please make sure that you have read and understood these mounting instructions and that you know all applicable prescriptions regarding occupational safety and accident prevention prior to installation and commissioning.

Selection and installation of the devices as well as their embedding into the controlling system require qualified knowledge of the applicable laws and normative requirements on the part of the machine manufacturer.

3.3 Explanation of the Symbols

E

Caution: Failure to comply with this warning notice could lead to interferences or malfunctions.
Warning: Failure to comply with this warning notice could lead to physical injury and/or damage to the machine.

3.4 Appropriate Use

E

The product described in these mounting instructions was developed to execute safety-related functions as a part of an entire assembly or machine. It is the responsibility of the manufacturer of a machine or installation to ensure the proper functioning of the system. The LIMAX S-RMS must be exclusively used for the applications authorized by the manufacturer.

3.5 General Safety Instructions

E

The user must observe the safety instructions in these mounting instructions, the country-specific installation standards as well as all applicable safety regulations and accident prevention rules. The information contained in these mounting instructions manual is provided without liability. Subject to technical modifications.

3.6 Exclusion of Liability

E

We shall accept no liability for damage and malfunctions resulting from incorrect mounting or failure to comply with these mounting instructions. The manufacturer shall accept no liability for damage resulting from the use of unauthorized spare parts or accessories.

For safety reasons, invasive work on the device as well as arbitrary repairs, conversions and modifications to the device are strictly forbidden; the manufacturer shall accept no liability for damage resulting from such invasive work, arbitrary repairs, conversions and/or modifications to the device.

4 Installation Procedure

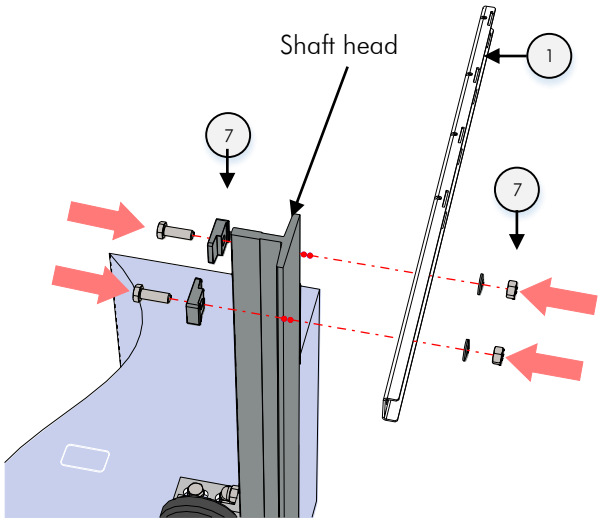


Fig. 1

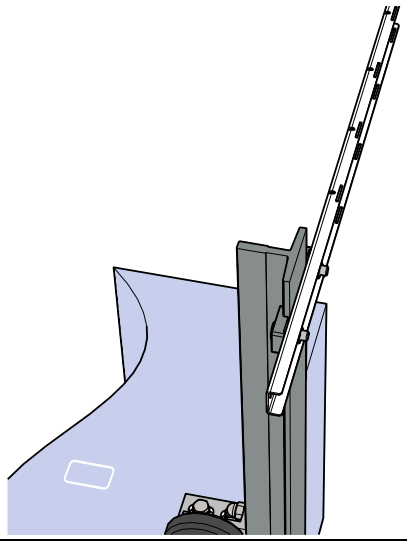


Fig. 2

Fig. 1 & 2:

Install one crossbeam (1) in the shaft head by using the rail clips (7).
Make sure that the clips screws are well tightened (min. 45 Nm), so that the crossbeam does not move.

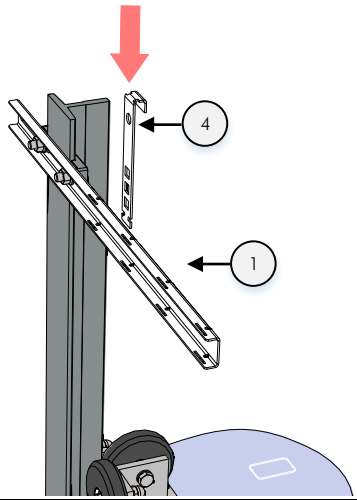


Fig. 3

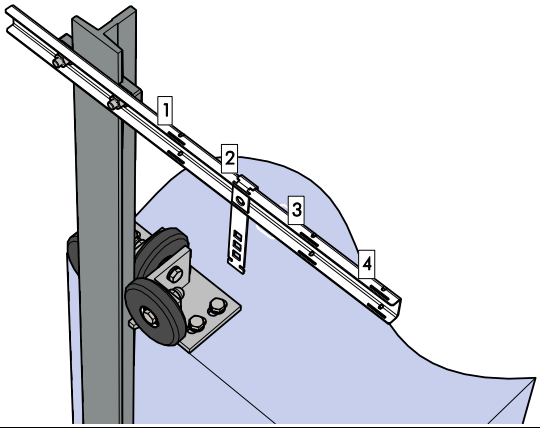


Fig. 4

Fig. 3 & 4:

Slide the tape fixation (4) into the crossbeam as shown. Use any of the slots provided depending on your specific space situation in the installation. A position as close to the guide rail as possible is advantageous. Memorize the used slot.

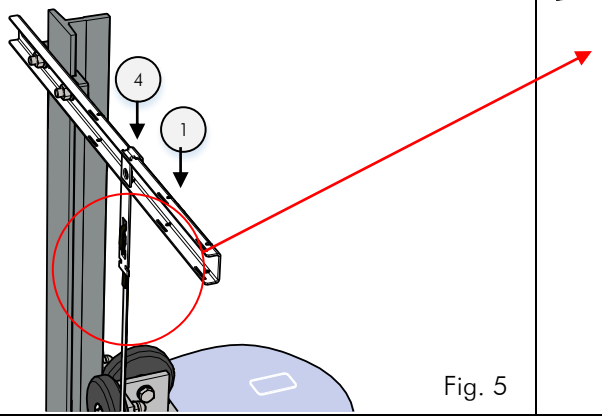


Fig. 5

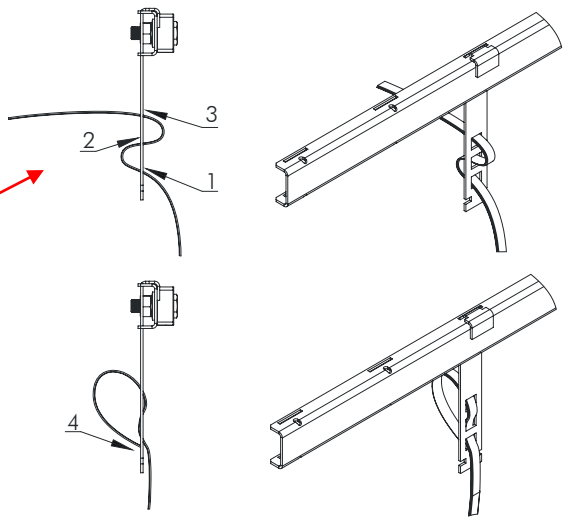


Fig. 6

Fig. 5 & 6:

This step must be done with the tape fixture (4) inside the crossbeam (1). Thread the tape through the tape fixture (4) and back down, as shown (FIG 6). Mind the orientation of the tape (FIG 7) – the magnet side must face the sensor body later on. Basically, the fixture works like a self-locking belt. Leave at least 20 cm tape at the spare end. Press the loops flat in the clamp. There should be a break in the upper loop. In the end, secure the tape with a cable tie (6) at the bottom of the tape fixation (4).

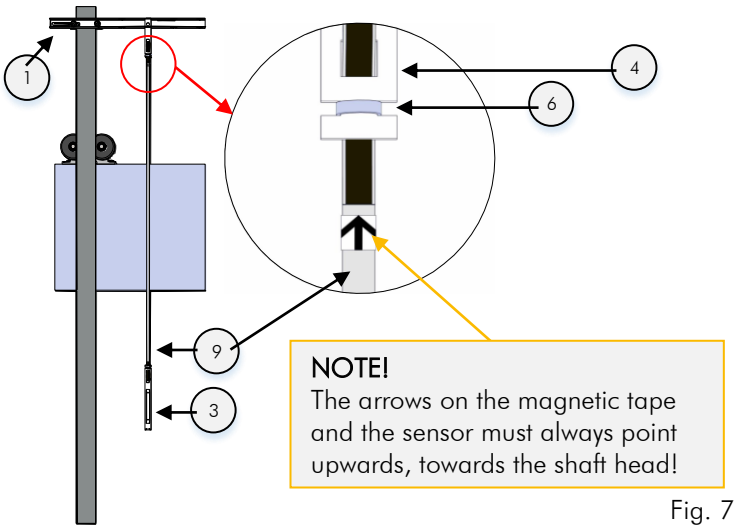


Fig. 7

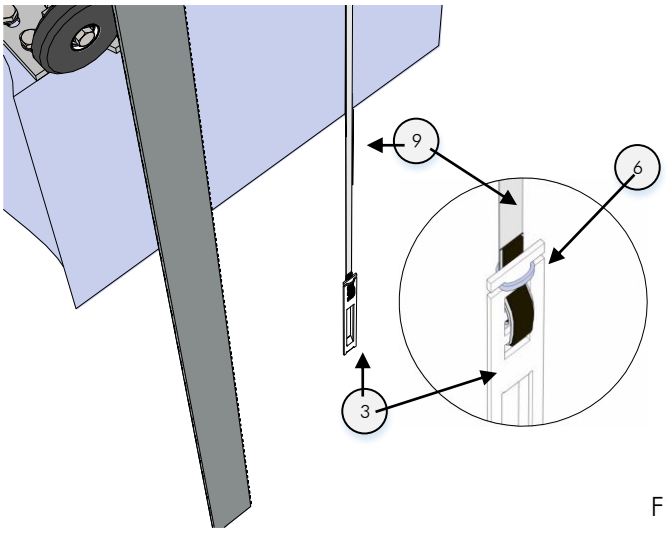


Fig. 8

FIG 7 & 8

After the tape (9) has been installed in the shaft, fix the tape fixture (3) for the presence detector to the lower end of the tape. Leave at least 20 cm at the spare end and press the loop flat in the clamp. There should be a break in the lower loop. The end, secure the tape with a cable tie (6) at the top of the tape fixture (3).

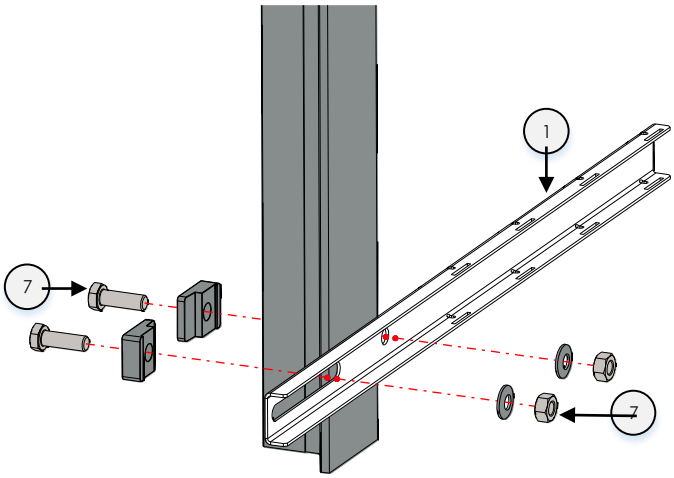


Fig. 9

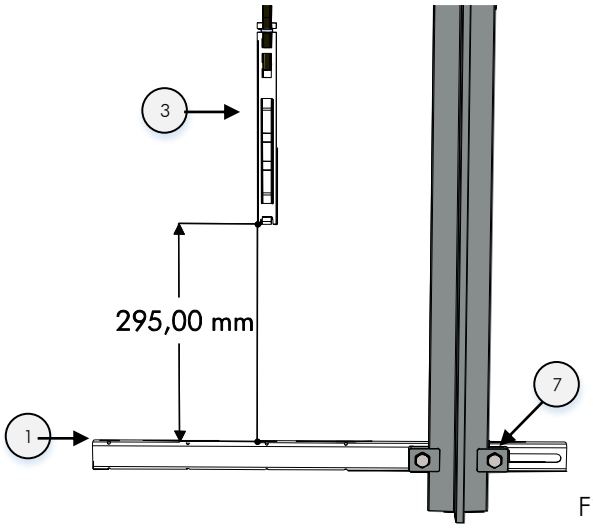


Fig. 10

Fig. 9 & 10:

Now install the second crossbeam (1) into the shaft bottom with a distance of 295 mm to the tape fixture for presence detector (3). Make sure that the screws (7) are well tightened with min. 20 Nm, so that the crossbeam (1) does not move.

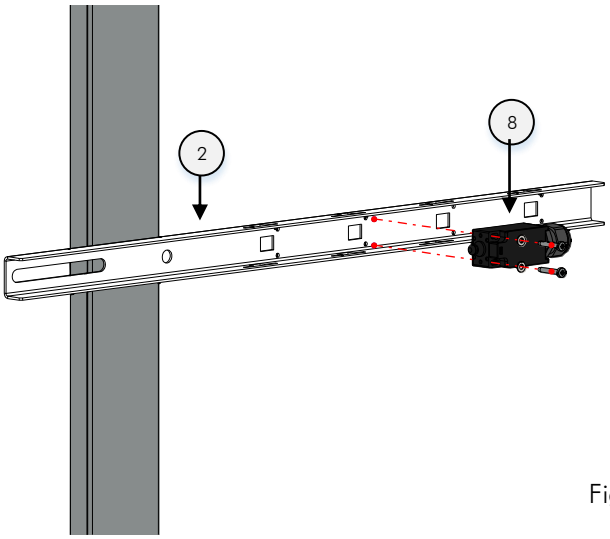


Fig. 11

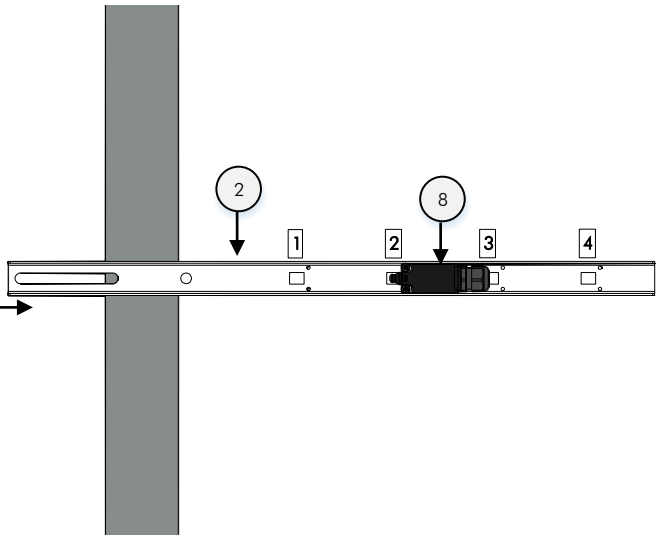


Fig. 11:

The crossbeam for the safety presence detector (2) should be pre-mounted for the installation later. Mount the cable screw connections (1 piece) to the presence detector. Align the presence detector (8) with the edge of the crossbeam (2). Then fasten the screws with 3 Nm. The presence detector should be positioned on the same slot, as you used during the assembly of the tape fixation (4) in the upper crossbeam (1) (see Fig. 3 & 4).

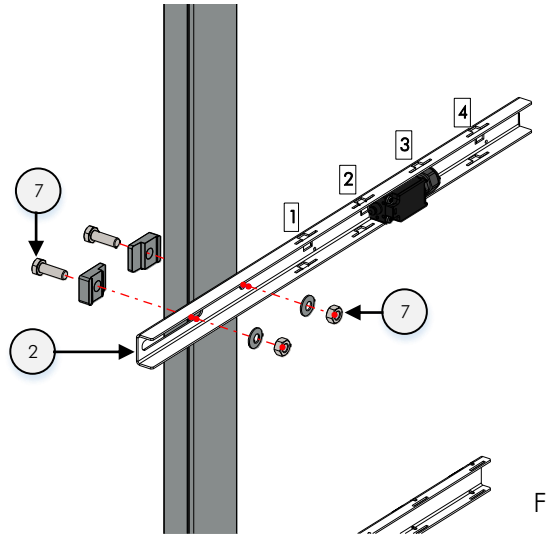


Fig. 12

Fig. 12:
Mount pre-installed crossbeam fort the presence detector (2) to the elevator rail. Fasten the screws (7) only so tight that the crossbeam (2) can still be moved.

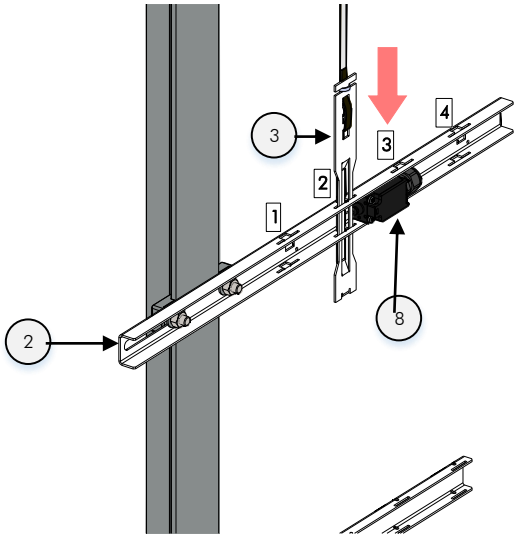


Fig. 13

Fig. 13:
Insert the tape fixture (3) into the crossbeam for the presence detector (2). Use the same slot, where the position detector (8) is positioned.

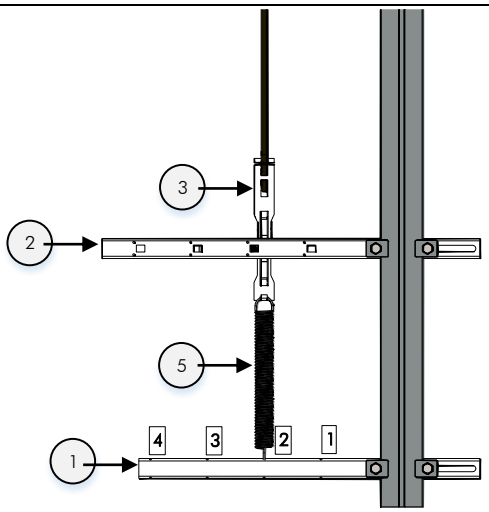


Fig. 14

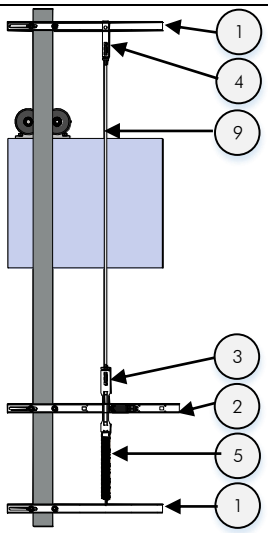


Fig. 15

Fig. 14 & 15:

Hook the tape fixture (3) into the spring (5). Make sure that the spring (5) is correctly placed in the drill hole of the lower crossbeam (1). The crossbeam for the presence detector (2) is positioned in such a way that only one marking on the tape fixture (3) can be seen towards both the top and the bottom. The crossbeam (2) must be mounted in a 90° angle to the elevator rail.

When the crossbeam (2) has been correctly positioned, the screws (7) are fastened with 20 Nm while making sure that the crossbeam (2) is not moved by accident.

ATTENTION!

Always use the same slot in all crossbars! The magnetic tape must hang vertically and parallel to the guide rail!
We recommend noting down the number of the slot you used first.

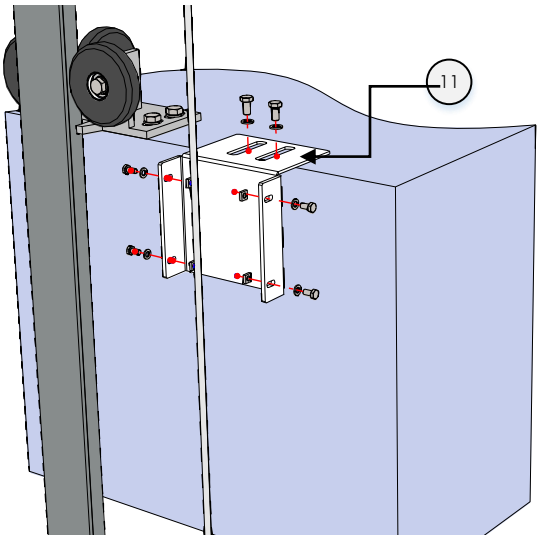


Fig. 16

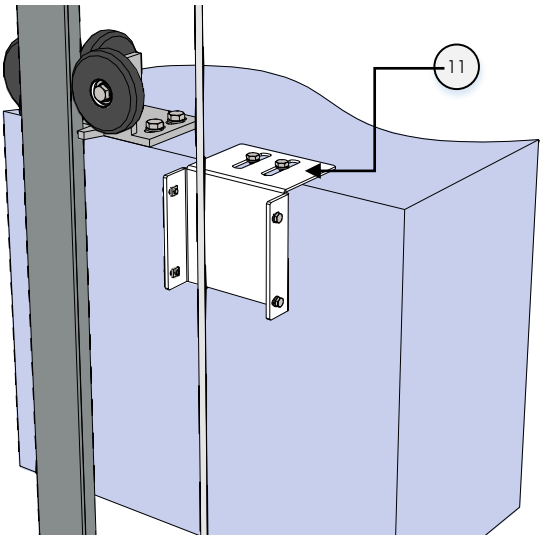


Fig. 17

Fig. 16 & 17: Installation of the mounting angle for LIMAX33 CP

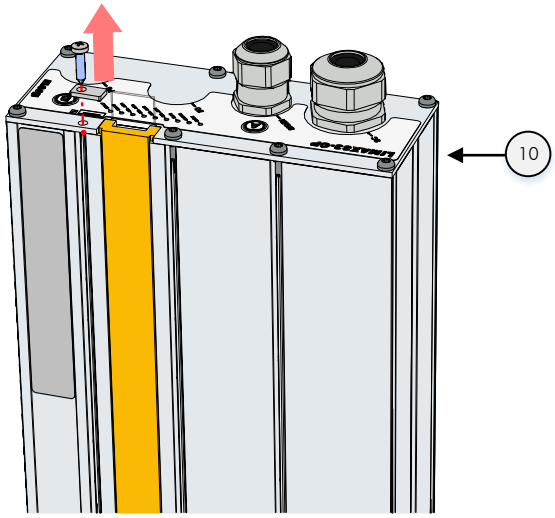


Fig. 18

Fig. 18: Remove the guide rail holding plate.

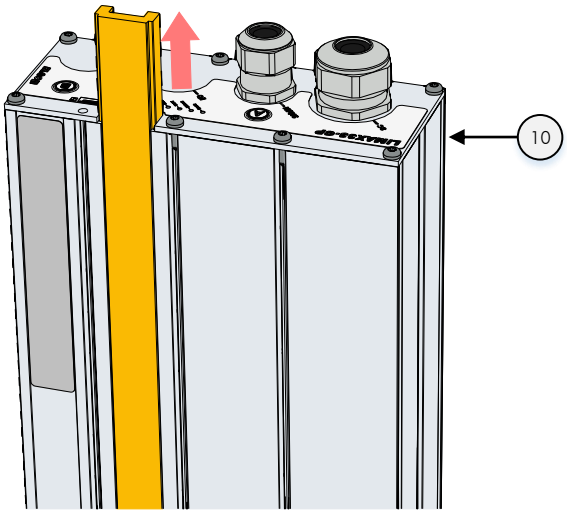


Fig. 19

Fig. 19: Remove the guide rail.

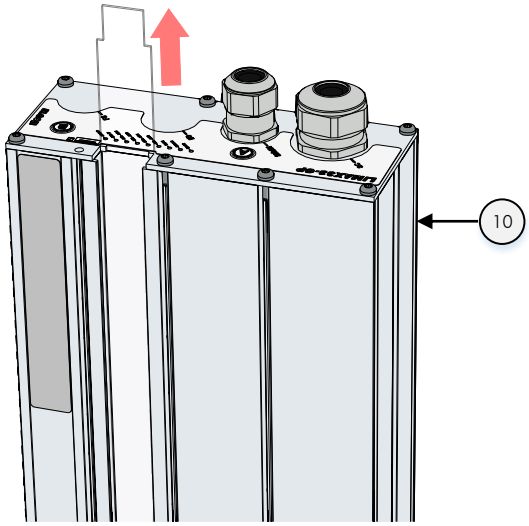


Fig. 20

Fig. 20: Remove the underlay.

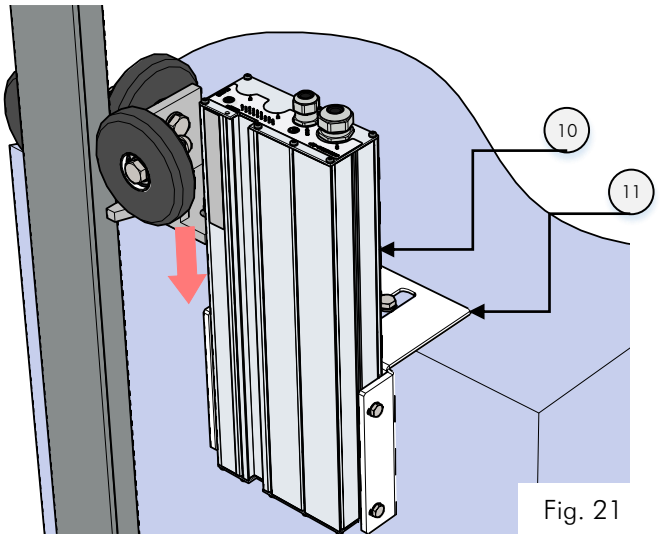


Fig. 21

Fig. 21: Move the LIMAX33 CP (10) to the center of the mounting angle (11) and fix it with the screws.

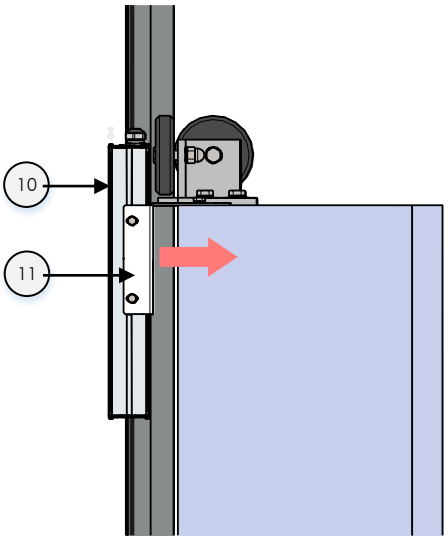


Fig. 22

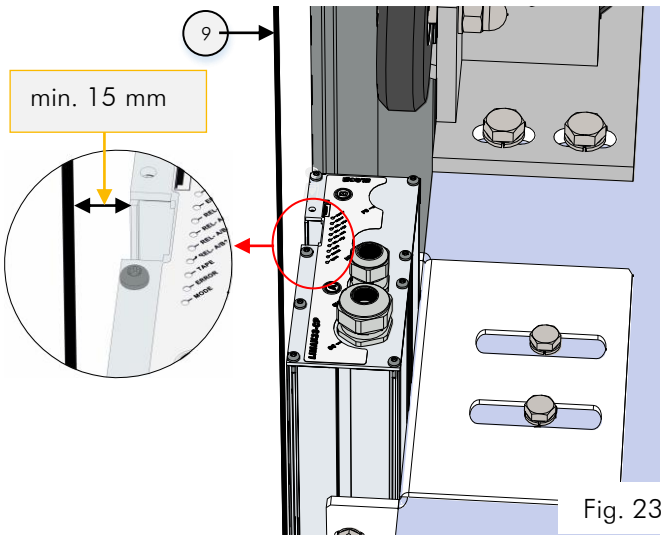


Fig. 23

Fig. 22 & 23:
Move the MW (11) to the cabin till you reach a gap of minimum 15 mm between magnetic tape (9) and sensor (10)

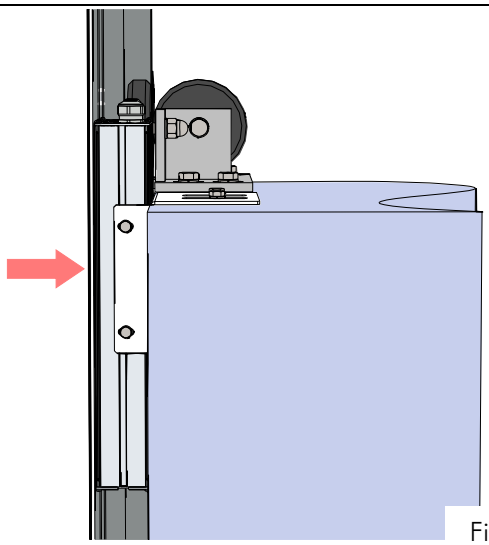


Fig. 24

Fig. 24:
Insert the magnetic tape (9) in the guide rail of the sensor (10)

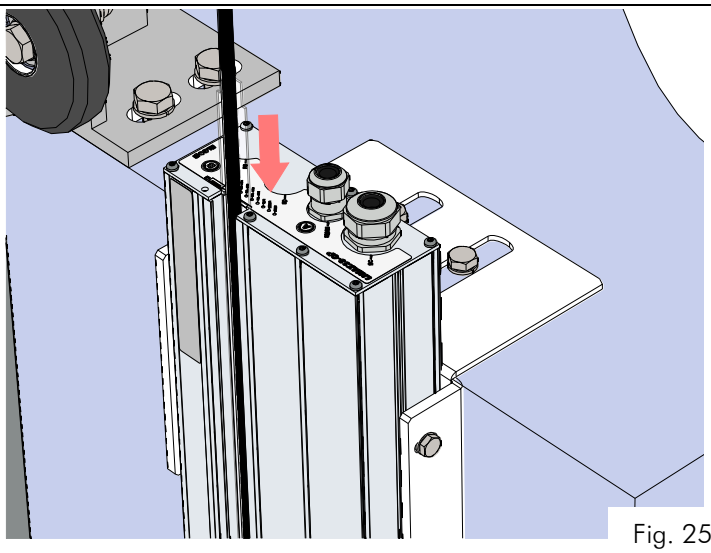


Fig. 25

Fig. 25: Insert the underlay.

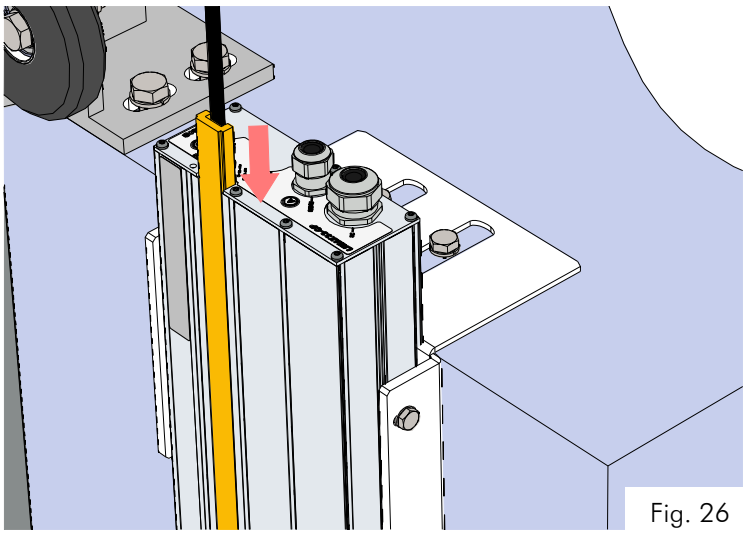


Fig. 26

Fig. 26: Insert the guide rail.

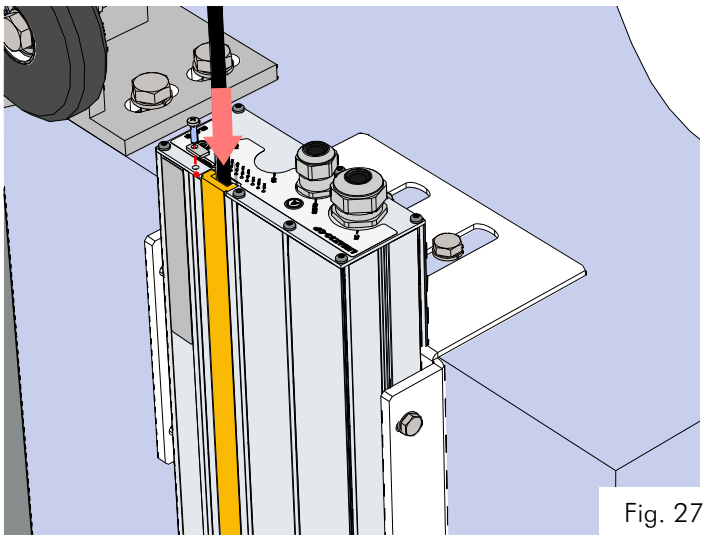


Fig. 27

Fig. 27: Fix the holding plate for the guide rail.

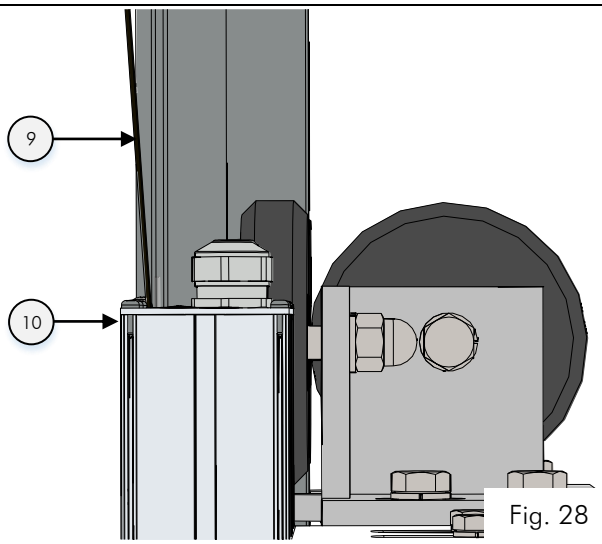


Fig. 28

Fig. 28:
Enforced contact between steel tape and polymer guide.

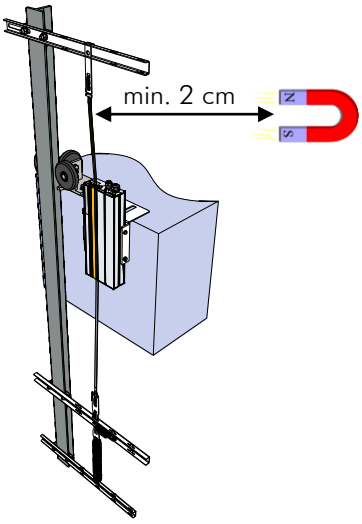
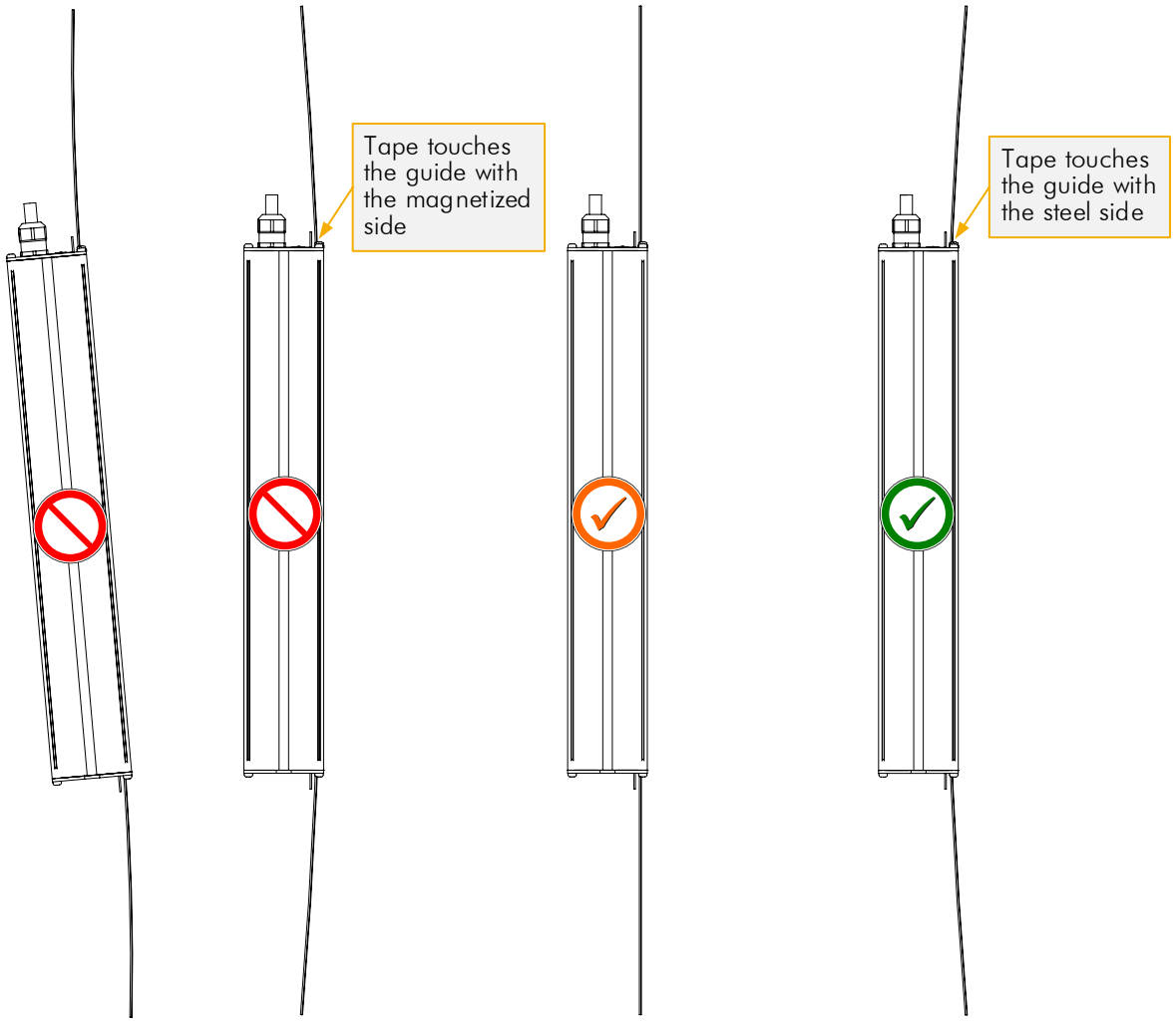


Fig. 29

Fig. 29:
External magnetic fields shall not exceed 64 mT (640 Oe; 52 kA/m), otherwise the magnetic coding will be damaged or destroyed.



Wrong vertical alignment

Wrong
Constant contact between magnetized side and sensor housing lead to abrasion

Tolerable
Vertical alignment minimal contact between band and sensor

Recommended
Enforced contact between steel band and polymer housing

Fig. 30: Assessment of the magnetic tape offset (pretension)

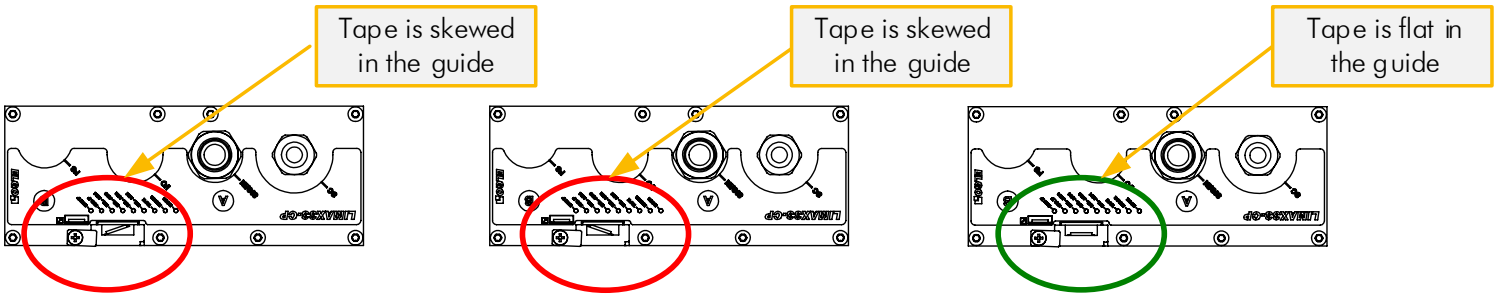


Fig. 31: Assessment of the guide rail of the tape in the sensor - twisted magnetic tape

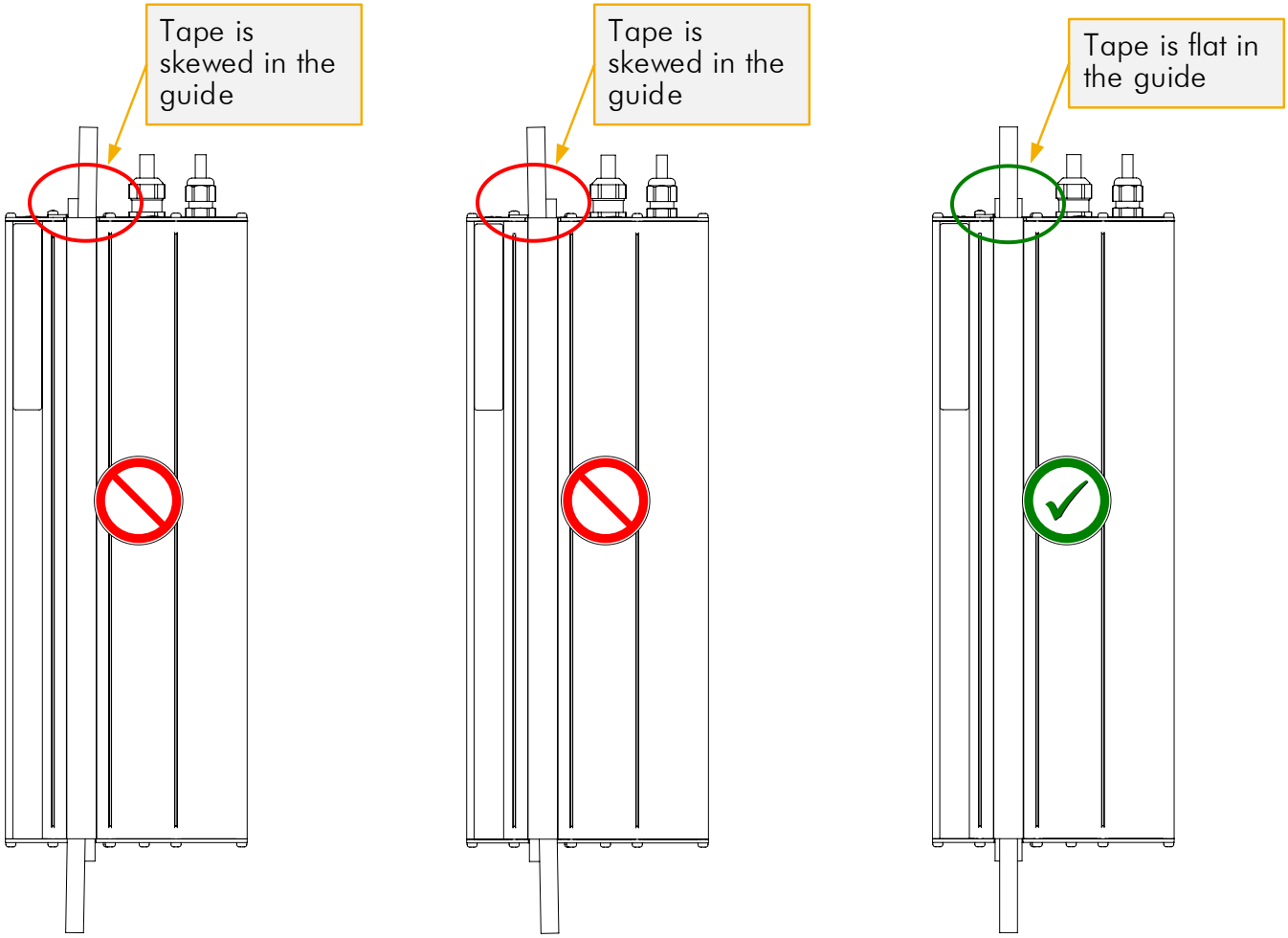


Fig. 32: Assessment of the guide rail of the tape in the sensor - skewered mounting of the magnetic tape

5 Magnetic Tape Cleaning

After installation as well as after metal work the magnetic tape must be cleaned.

- Only use a clean, dry cloth for this purpose.
- Beginning at the top of the shaft drive down the complete travel distance.
- Pull the tape with light pressure through the cloth.

	NOTE! Be specifically alert if steel construction work is taking place in the shaft. Steel particles released by grinding, welding or such work will adhere to the magnetic tape. The tape is insensitive to fine metal dust. However, coarser metal chips can cause problems. Clean this debris off instantly.
	DO NOT USE A MAGNET FOR CLEANING! Never use a magnet to remove metal chips from the magnetic tape. This will destroy the magnetic code and thus the magnetic tape.
	PROTECTIVE GLOVES! Always wear protective gloves when cleaning the magnetic tape.

Repeat the cleaning process before putting the elevator into operation after complete installation.

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