

TRACTION MRL LIFT ATLAS EU 2:1

Installation manual

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1. ABOUT THIS DOCUMENT

1.1 Document information.

Modification no	1	2	3	4	5	6	7
Modification date	14.01.14	26.08.2014					
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Legal owner	KLEEMANN HELLAS SA						
Title	Owner's manual ATLAS EU 2:1						
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Chapter:

1 - 4

Created:

L. Theocharis

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Translated:

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1.2 Safety warnings definition.

DANGER: Draws attention to a high risk of serious injury or death of persons.

Warning: Draws attention to risk of serious injury or death of persons or extensive damage to property.

Caution: Draws attention to information containing important instructions. Failure to observe the instructions can lead to damage and faults.

Important note: Useful information that must be read.

1.3 Scope of supply.

The lift ATLAS EU 2:1 MRL complies with the 95/16 EC, mainly through the compliance of standard EN 81-1:1998 + A3:2009.

This lift has a specific range of application regarding the travel, speed, payload, etc. All of its characteristics are recorded at the EC type examination.

1.4 Information concerning the product.

1.4.1 Scope of the current document.

Important note: The current document consists part of the documentation of complete lift systems and it concerns lifts type ATLAS EU 2:1.

In special cases that decline from the basic version, special procedures need to be followed. If customers are not able to carry out the task, the aid of the manufacturer should be asked.

1.4.2 Validity, date and terms considering the specific document.

The current document is valid until the issue of the next version. The version number is depicted on paragraph 1.1.

1.4.3 Manufacturer.

The product is manufactured by:

KLEEMANN HELLAS SA

Located in

KILKIS INDUSTRIAL AREA

P.O. BOX 25 Postal Code 61100 KILKIS, GREECE

1.4.4 Definition, type and capacity.

Definition: Traction MRL lift

Type: ATLAS EU 2:1

Capacity 400 - 1000 kg

Drawings of each order shall be provided from KLEEMANN's Technical Department.

1.5 Quality assurance.

The quality assurance system employed ensures the high level of quality of all KLEEMANN's complete lift systems. The ISO 9001 quality assurance system employed by KLEEMANN incorporates all the detailed systematic activities required for the compliance of the specific product with all the relevant safety regulations.

The measures of quality assurance, extensions of them, test methods, documentation and important points that should be checked are set by the installer to its own structural features.

Important note : All necessary documents regarding safety instructions, use and maintenance of lift components, are contained within the user's manual, supplied along with every complete KLEEMANN lift and should always be at the disposal of persons involved in the installation and maintenance of the lift.

1.6 Instructions for installation of controller and pre-wiring.

Installation instructions for all electrical components are inside the pre-wiring package.

1.7 Transportation and temporary storage.

1.7.1 Unpacking of components.

Thoroughly check the consignment for any possible damages or missing parts right after reception. Notify the manufacturer immediately in written for any problems regarding the consignment. Complaints that are notified to the manufacturer long after the reception of the consignment will not be accepted. Remove all packing material prior to installation.

1.7.2 Temporary storage.

Temporary storage should not take place in high humidity environments. Check all packed components regularly, for the possible existence of condensed water which could cause wear of the traction machine and other electrical parts.

1.7.3 Materials protection.

Caution: The state of the supplied components should be checked at regular intervals, if the storage is to exceed the suggested period. KLEEMANN will not be responsible for any failure by other parties to comply with the suggested storage guidelines.

1.7.4 Protection from environmental conditions.

The storage area should be dry and free of dust. Protection against time can only be achieved through proper packaging and storage.

2. GENERAL DESCRIPTION ATLAS EU 2:1 MRL Serial MRL Controller.

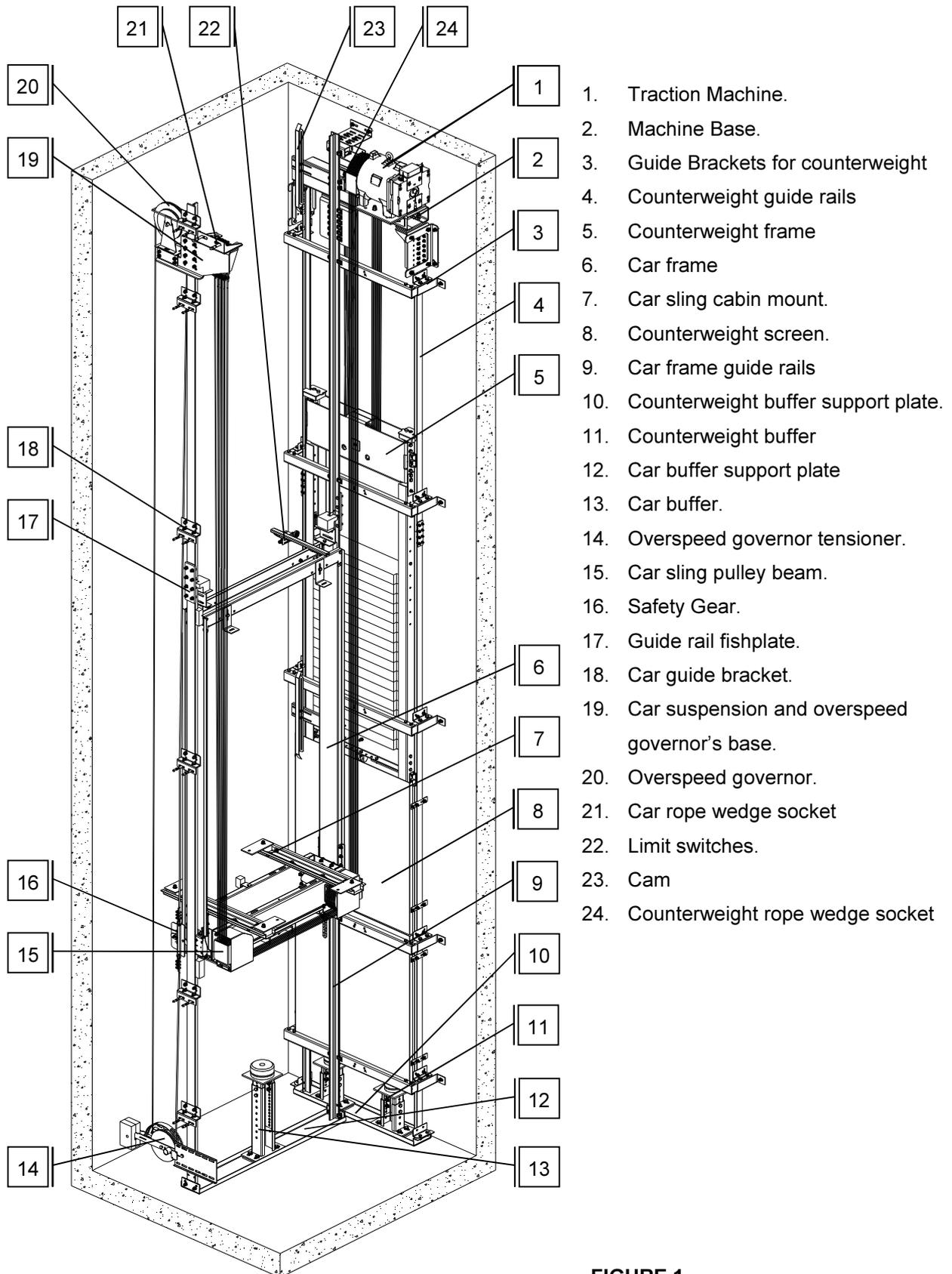


FIGURE 1

4. GENERAL DESCRIPTION ATLAS EU 2:1 MRL CH-1000 Controller.

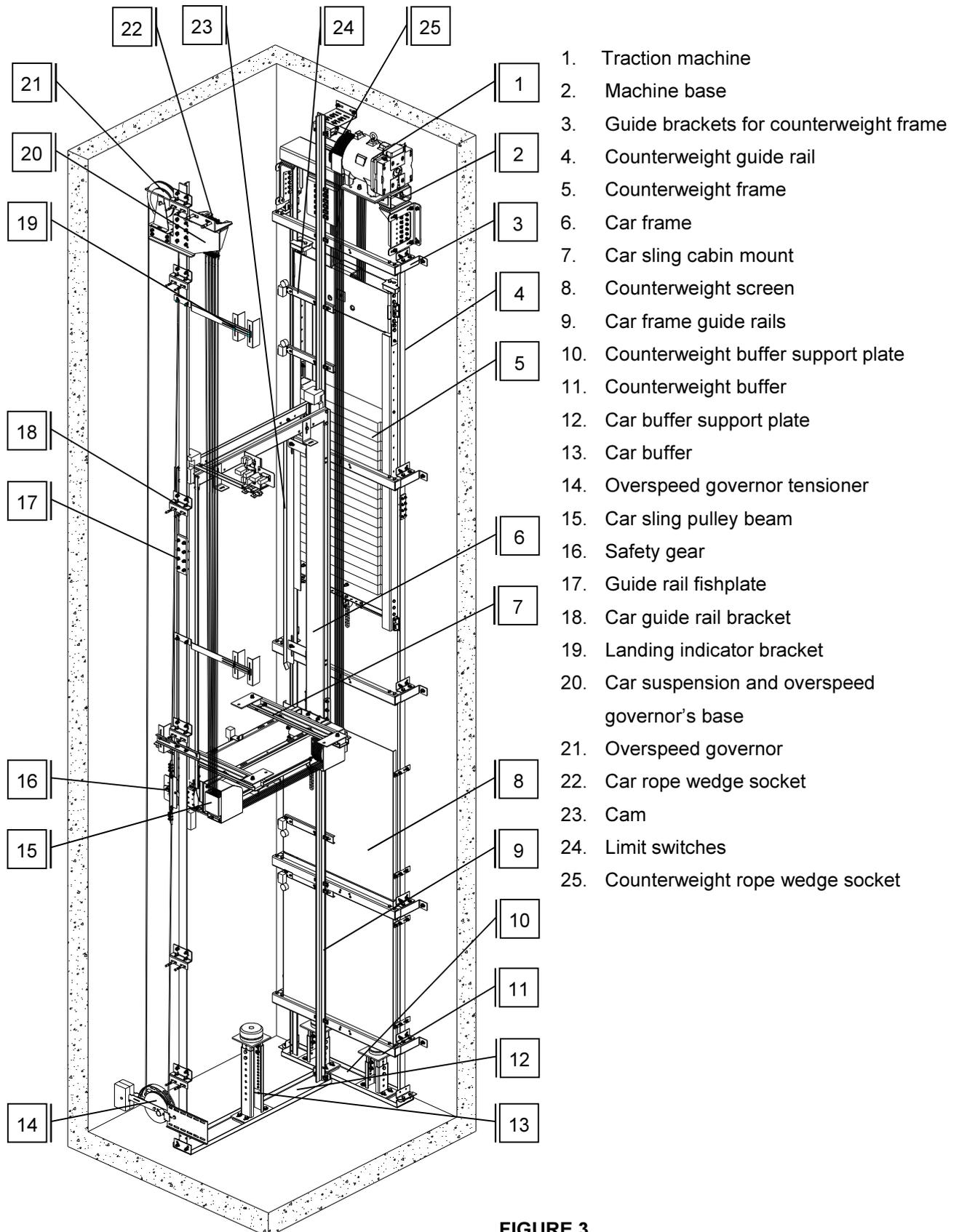


FIGURE 3

5. GENERAL DESCRIPTION ATLAS EU 2:1 MRL

Lisa Controller

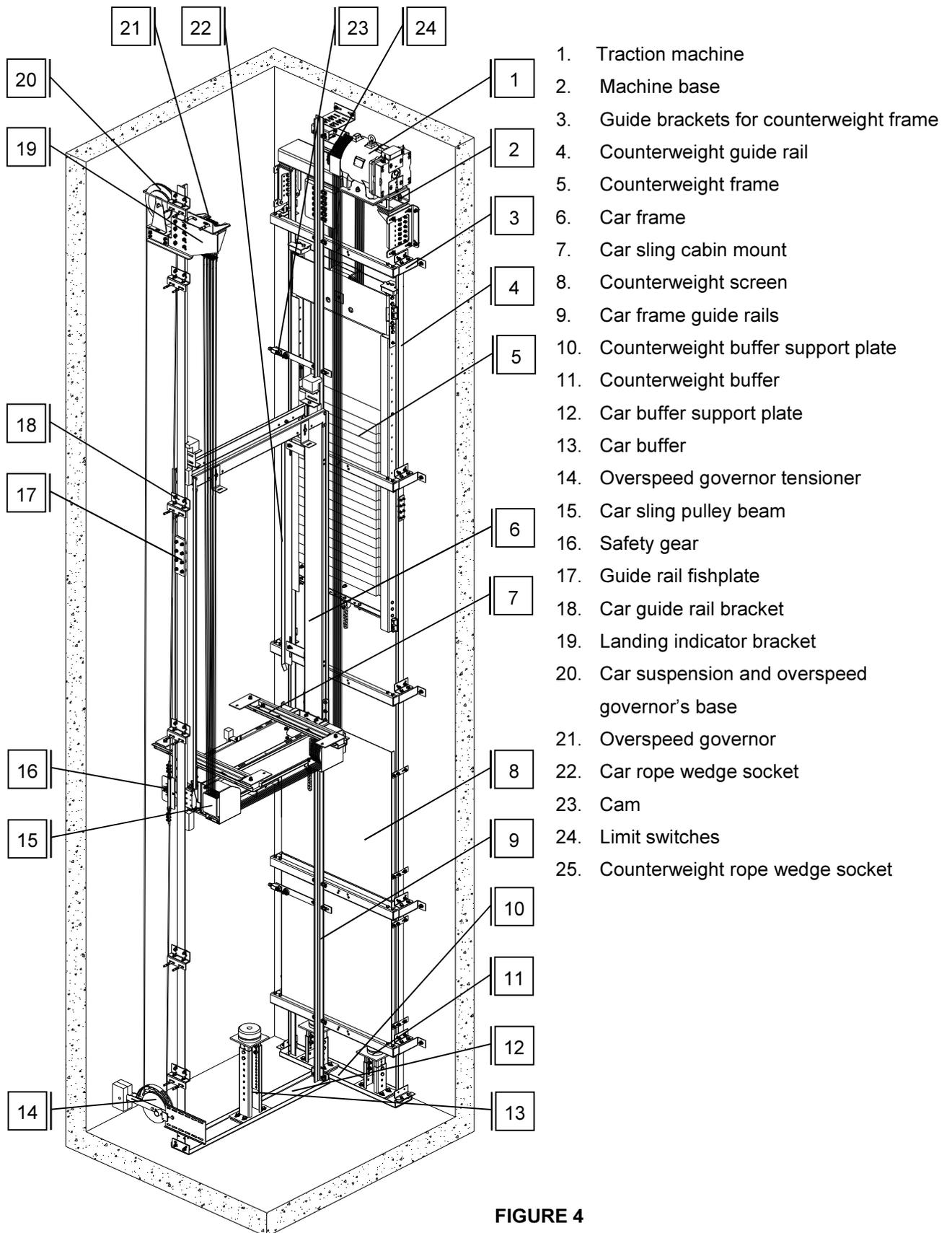


FIGURE 4

6. INSTALLATION INSTRUCTIONS

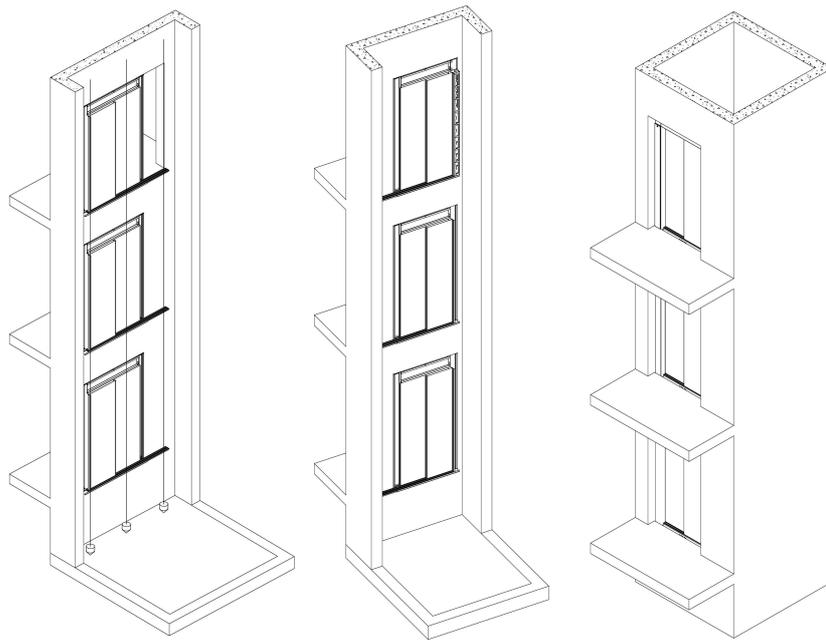


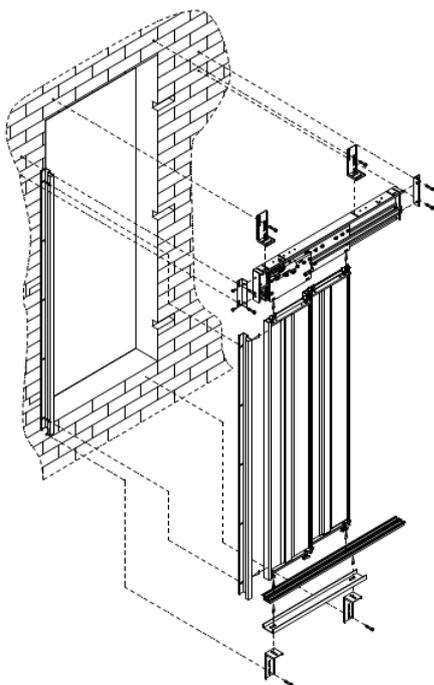
FIGURE 5

6.1 Installation of landing doors in the shaft.

The exact position of the doors is determined by the plan view supplied by the manufacturer. Suspend a plump line from the shaft ceiling until the pit, secure the plump line and install all the landing doors (figure 5).

Caution: At the upper landing there should be provision, sufficient to fit the controller cabinet (if there is one).

In different cases the controller can be installed at the door frame of the upper landing (figure 5).



- For more details please refer to door's installation manual.
- Doors can be automatic, center or side opening.

FIGURE 6

6.2 Installation of guide rails and plates for buffer support.

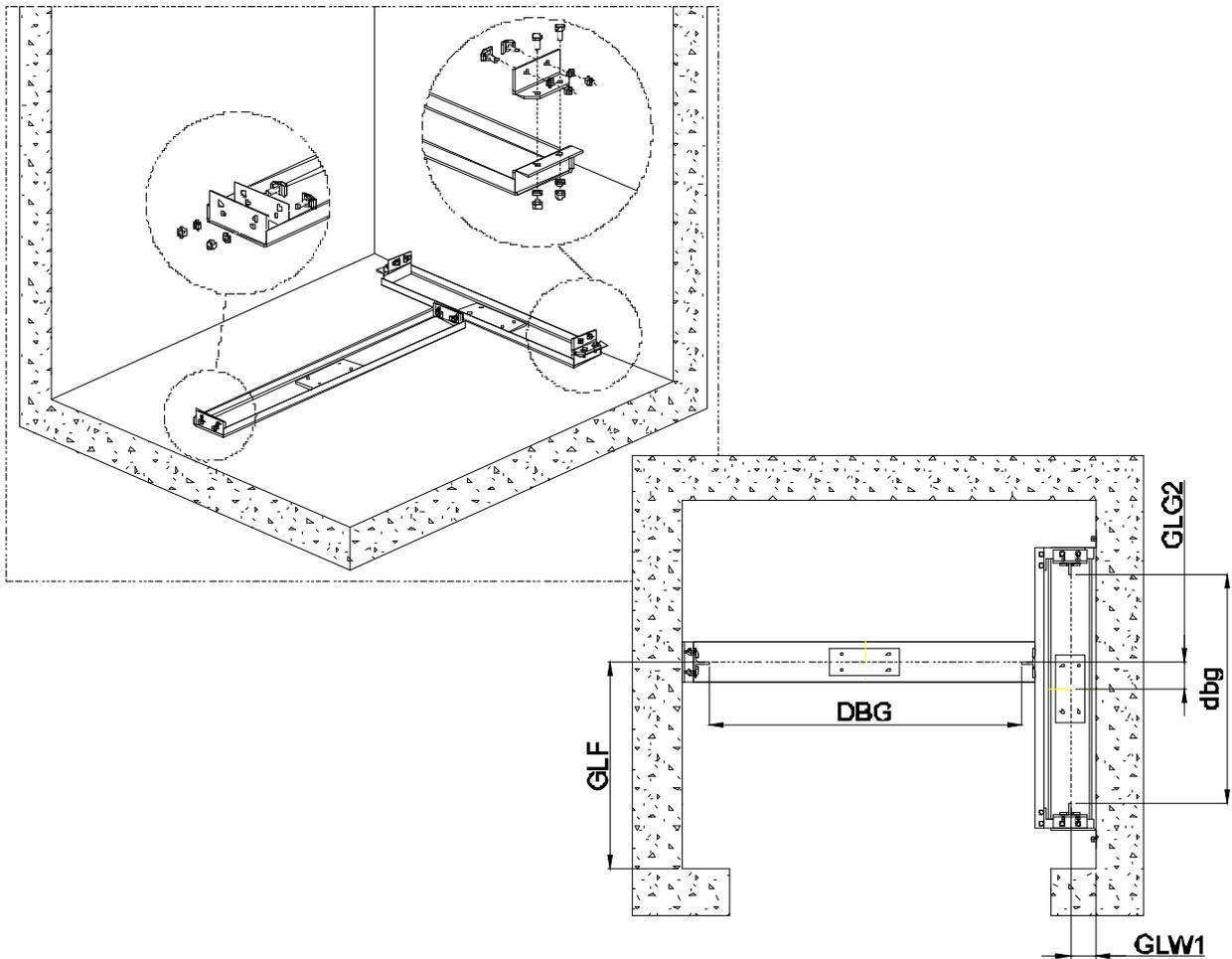


FIGURE 7

FIGURE 8

Firstly, place the two plates for the main and auxiliary guide rails on the pit floor as shown in figure (7). Their exact location according to the shaft walls is determined after the guide rails are placed as shown in figure (8).

The distances GLF, GLW1, GLG2, DBG and dbg are given in the shaft's plan view.

The two plates must osculate at the whole pit length, so they can support the buffers. Each plate has a base on which both the car and counterweights buffer bases will be mounted.

The distance between the guide rail brackets is given in the cross section view of the shaft, supplied by the manufacturer. For larger distances between the car guide rail and the wall, extension for the brackets can be used as an option, as shown in figure (9).

Warning: Correct fixing of the guide rails and of the buffer plates is crucial because it affects the positioning of the rest lift components.

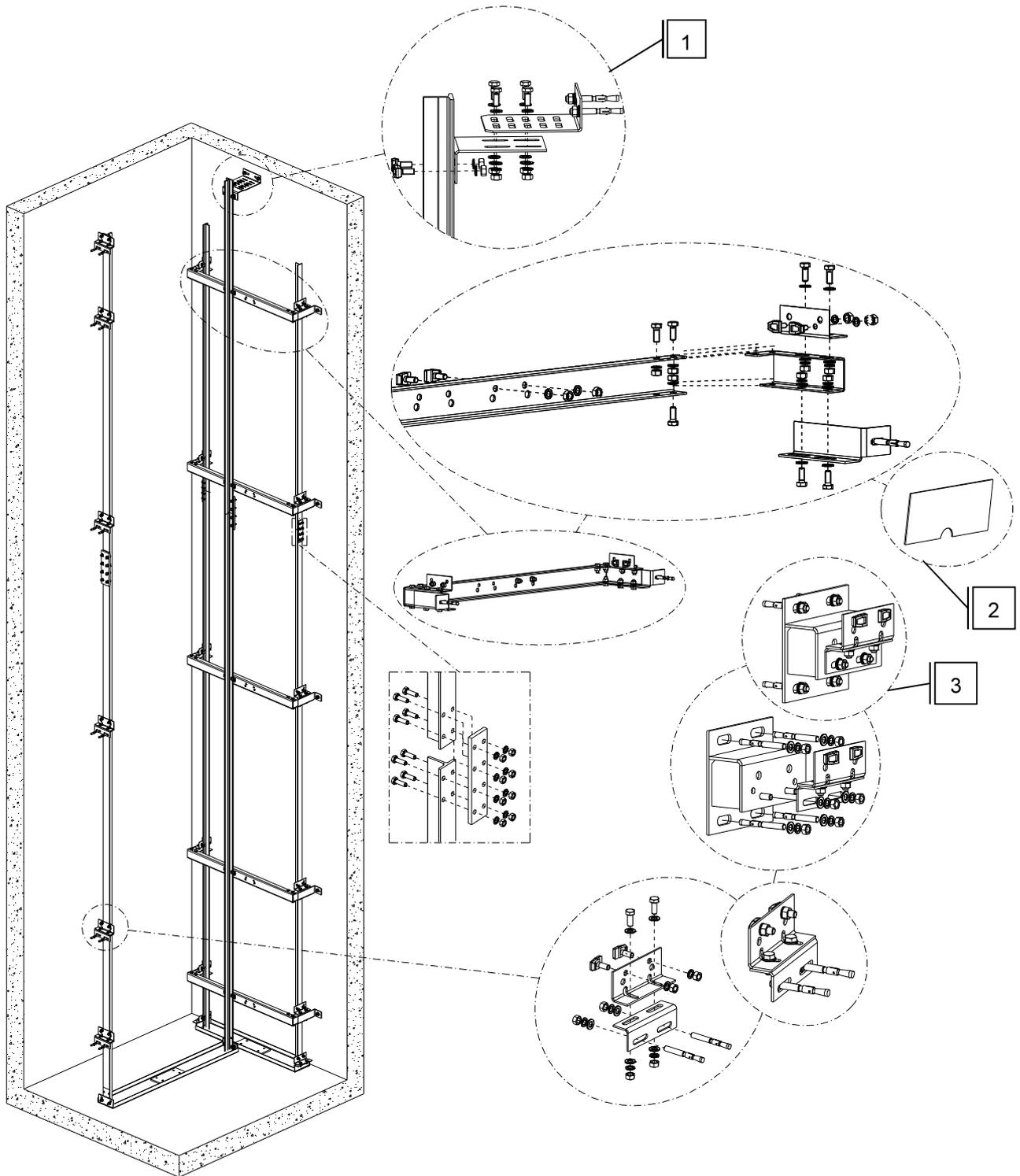


FIGURE 9

1. The upper top car guide rail bracket, from the side of the counterweight frame.
2. Bracket addition (if necessary).
3. Bracket extension.

6.3 Installation of machine and rope suspension bases.

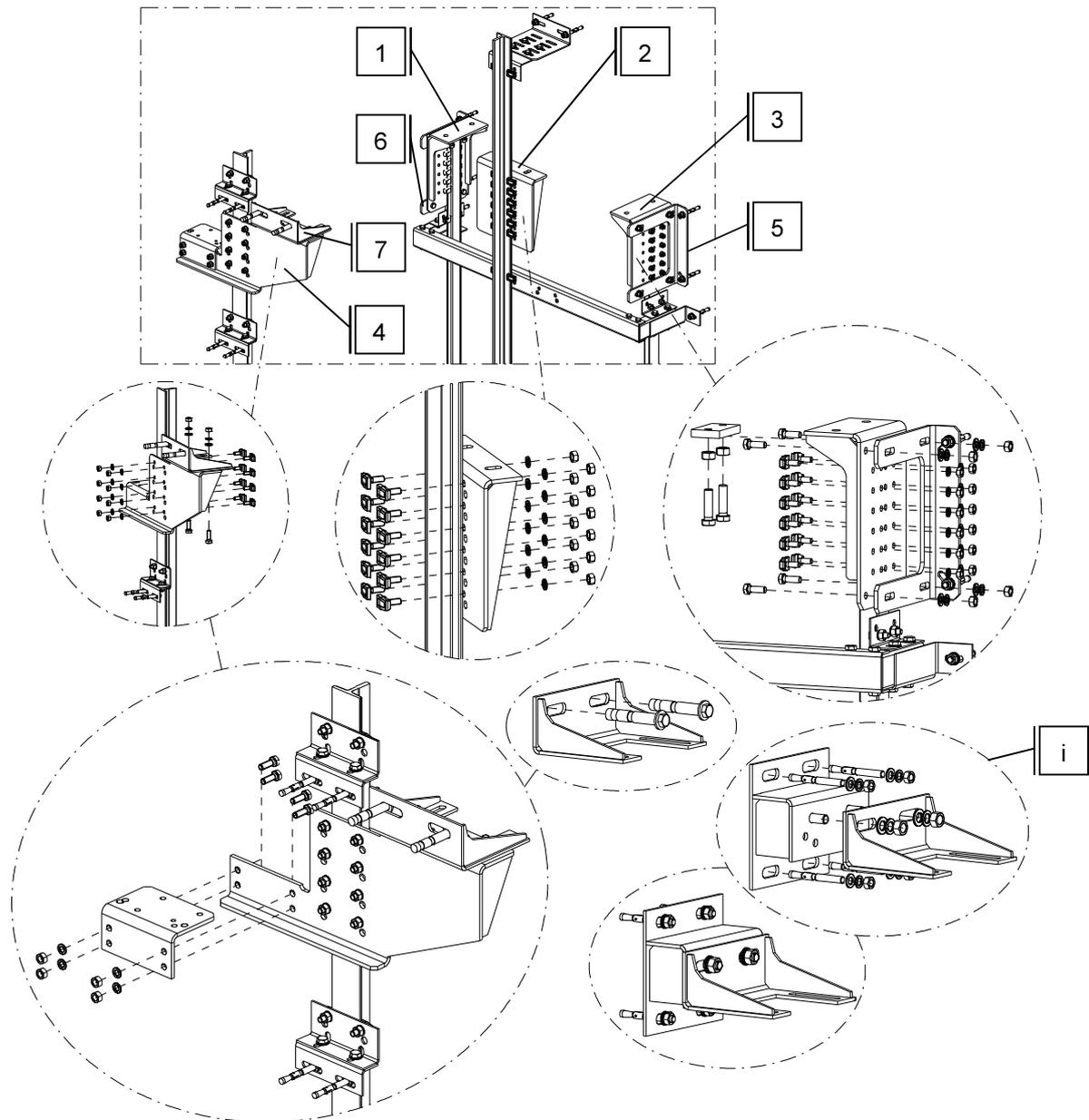


FIGURE 10

Place the base (1) at the guide rail and align it. Then, place the base (2) and align it at the same level as base (1). Likewise, align base (2) with base (3). The upper part of machine bases (1,2,3) must be at the same level. Afterwards, secure the rope suspension and overspeed governor base (4) – on top of the guide rails with forge clips (figure 10). In figure (11) the exact location of all four bases is determined. Dimensions a, MLB, b, c, d, e, WLB, f can be found at the accompanying installation drawings.

The machine base wall brackets (5, 6) and the suspension base strengthening (7) are plugged to the shaft concrete, with heavy duty anchors M12X120, which are supplied by the manufacturer (figure 10).

- i. Suspension base strengthening extension.

Warning:

- Base 1, 2 and 3 must be horizontal and leveled.

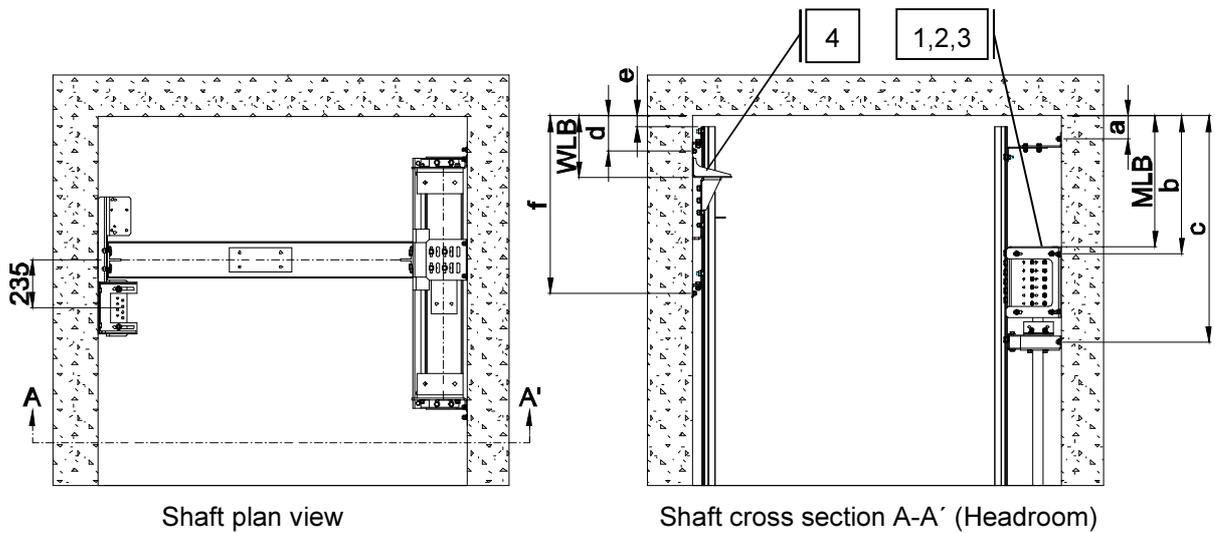


FIGURE 11

6.4 Traction machine base.

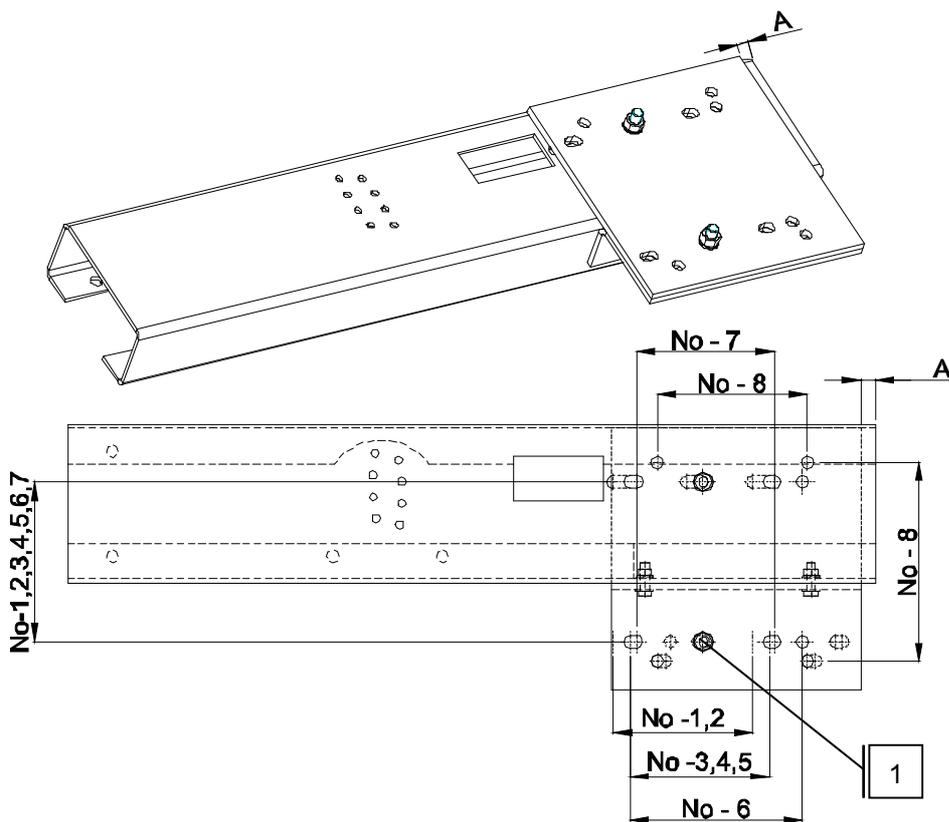


FIGURE 12

1. Placement of the machine plate.

Placement of the machine is done according to the machine type. (It depends on value A, which is given below)

No	MACHINE - PULLEY	A (dbg of counterweight frame ≤1000)	A (dbg of counterweight frame=1200)
1	ZA SM190.15C - 240-88	42	142
2	ZA SM200.15C - 240-88	42	142
3	ZA SM200.20C - 210-106	19	119
4	ZA SM190.23C - 240-124	19	119
5	ZA SM200.20C - 240-124	19	119
6	ZA SM200.30C - 240-124	19	119
7	KLEEMANN RNS 240	19	119
8	KLEEMANN RN1 240	19	119

Note: dbg=distance between guide rails.

6.5 Installation of the machine base.

A set of the following is delivered with the lifting machine:

- 3 plates of elastic rubber 15mm (2 different sizes) (i)
- 3 metal plates of 10mm (2 sizes) (ii)

The elastic rubbers act as shock absorbers and are placed according to **figure (13)**, between the motor and the base.

Danger: The elastic rubbers with 15mm thickness are placed above the base, afterwards the metal plates are placed and finally the machine base.

Danger: Tightening of the screws must be stopped when the 15mm thick elastic rubbers are compressed to a thickness equal of 8mm.

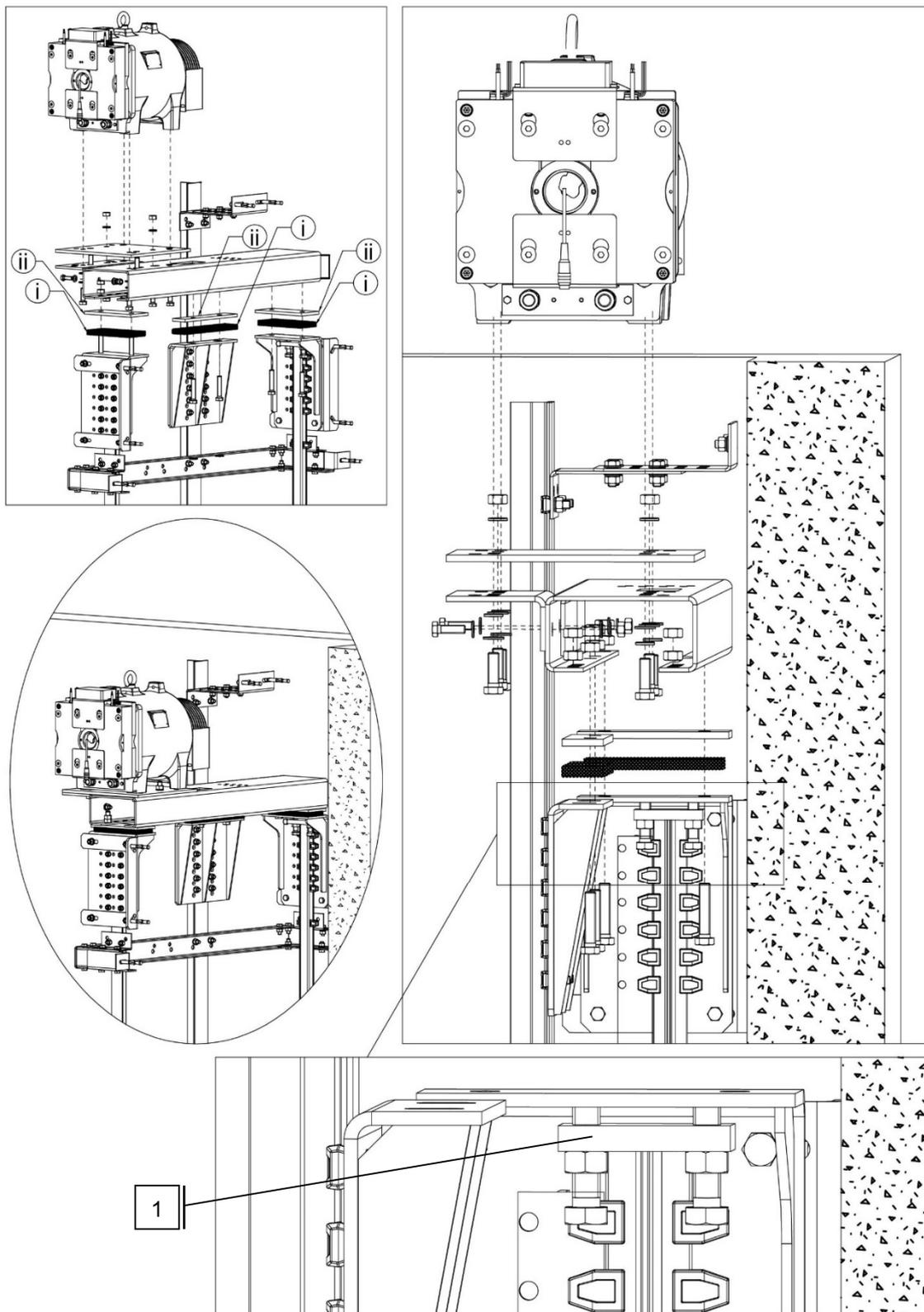


FIGURE 13

1. Safety plate:

Between the counterweight guide rails and the machine base brackets, safety plates are placed (tighten until the plate is fully attached on the upper part of the guide rails and then secure the screws), so the guide rails can receive forces exercised from the machine base.

6.6 Assembly and installation of counterweight frame. dbg≤1000.

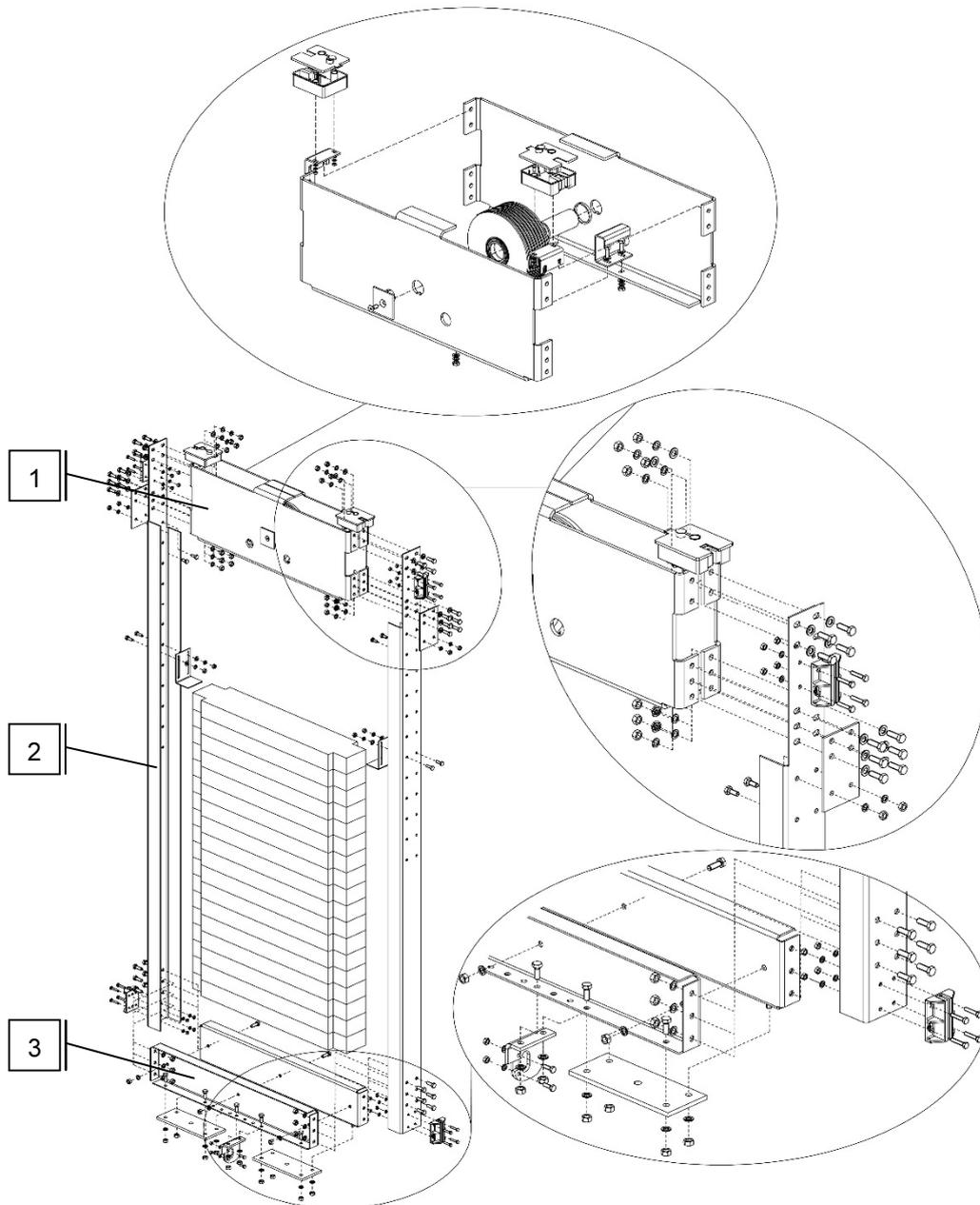
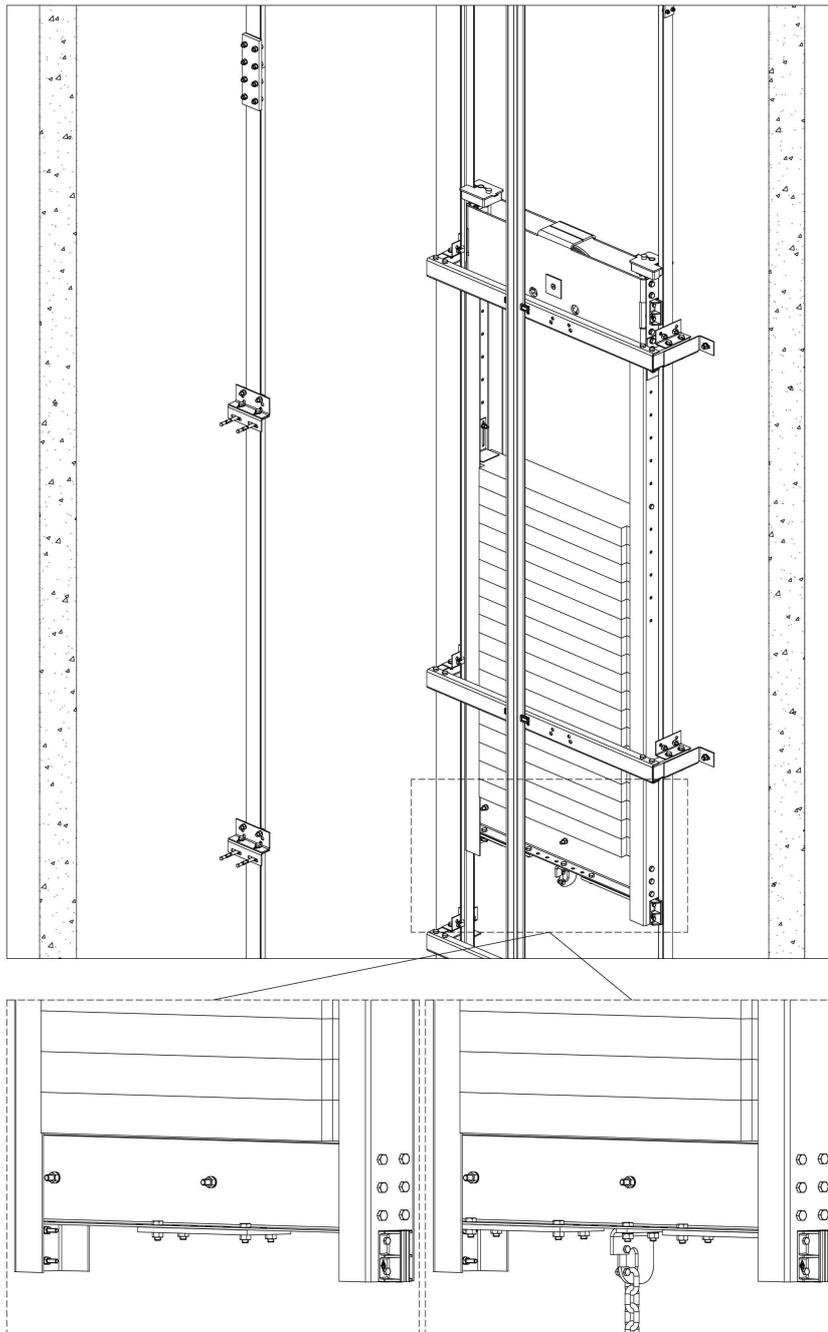


FIGURE 14

The counterweight frame is consisted of three main parts:

1. Upper cross beam: At the upper cross beam the pulley and the counterweight's guide rails oil tags are placed.
2. Counterweight side beams: They are connecting the upper with the lower cross beam and then the sliding shoes are placed, on them.
The counterweight fillers are placed inside the frame and are secured with the use of two brackets.
3. Lower cross beam: The lower cross beam is consisted of two pieces.



Without compensation chain

With compensation chain

FIGURE 15a

FIGURE 15b

- ❑ Assembly of the counterweight frame must be done within the counterweight guide rails.
- ❑ Install with the following order: First the lower cross beam, secondly the two side beams and finally the upper cross beam, everything inside the counterweight guide rails.
- ❑ Without compensation chain, the counterweight frame has a buffer plate located at its center (figure 15a).
- ❑ With compensation chain, it has two buffer plates located on both ends (figure 15b)

6.7 Assembly and installation of counterweight frame.
dbg=1200.

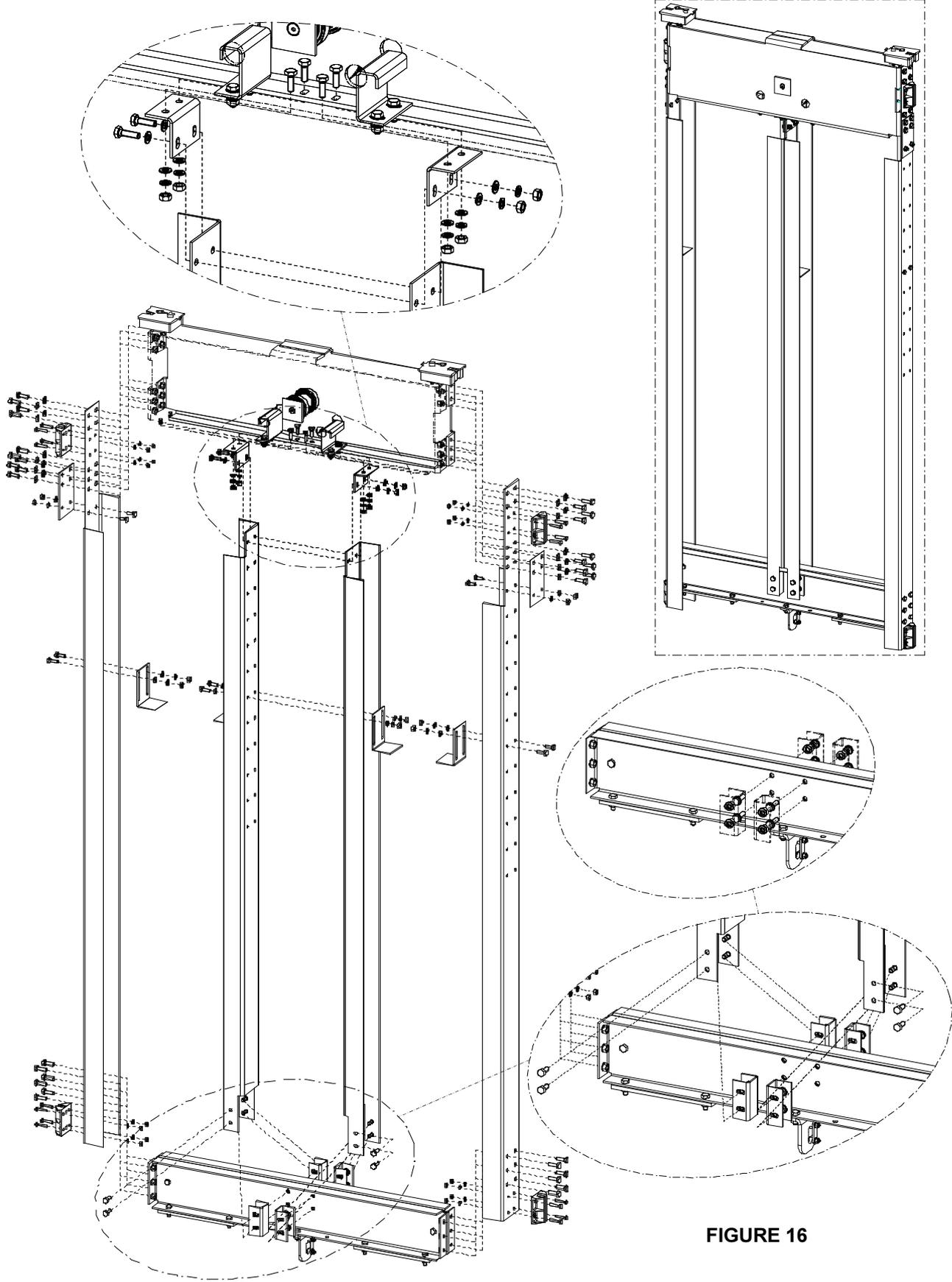


FIGURE 16

6.8 Assembly of car frame.

6.8.1 Assembly of upper beam-side beam and limit switches installation Serial MRL Controller.

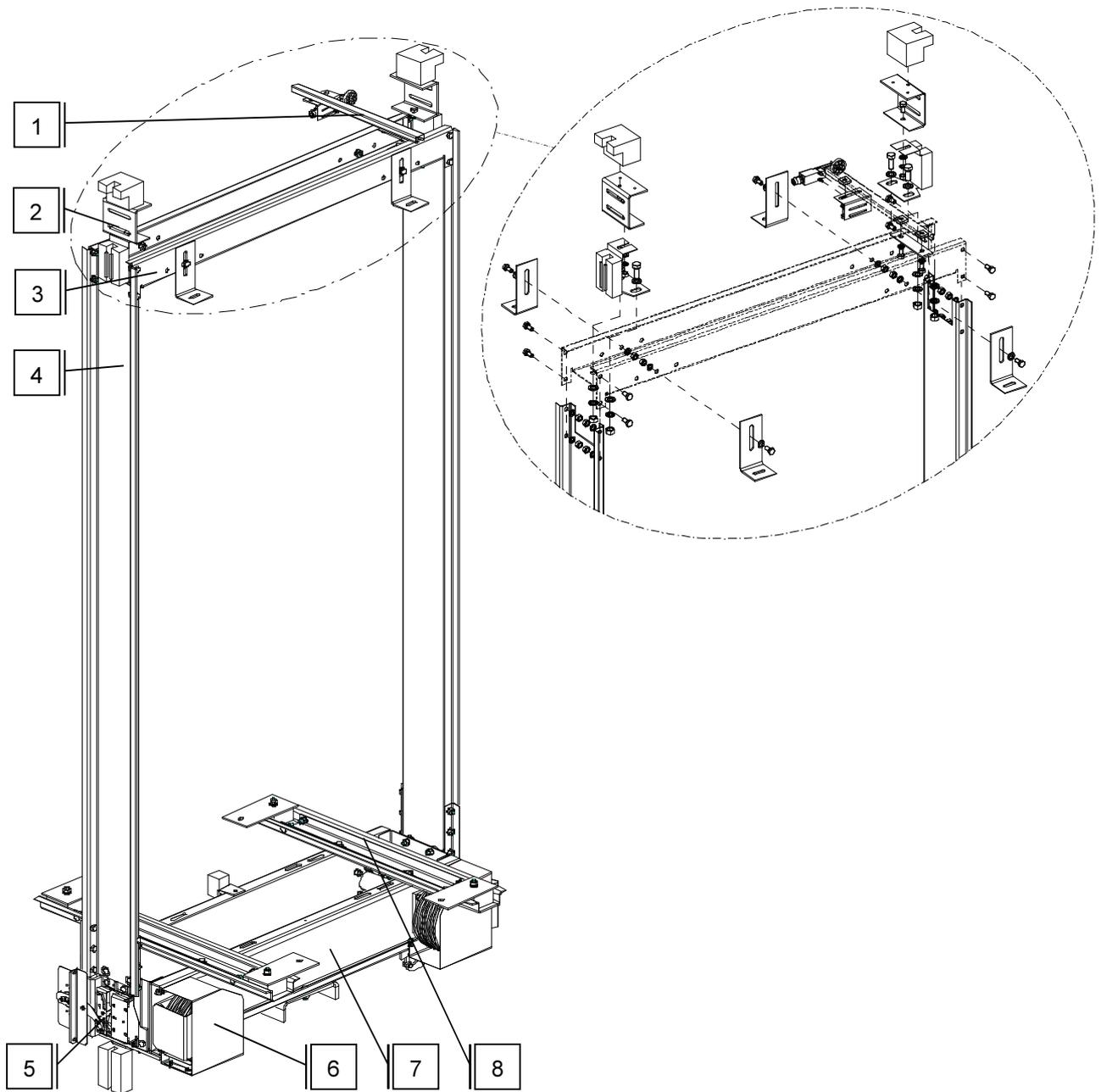


FIGURE 17

1. Limit switches
2. Base for magnetic switches
3. Upper cross beam
4. Side cross beam
5. Safety gear
6. Car sling pulley beam
7. Lower cross beam
8. Car sling cabin mount

6.8.2 Assembly of upper beam - side beam, limit switches and landing indicator installation.

U-Control Controller.

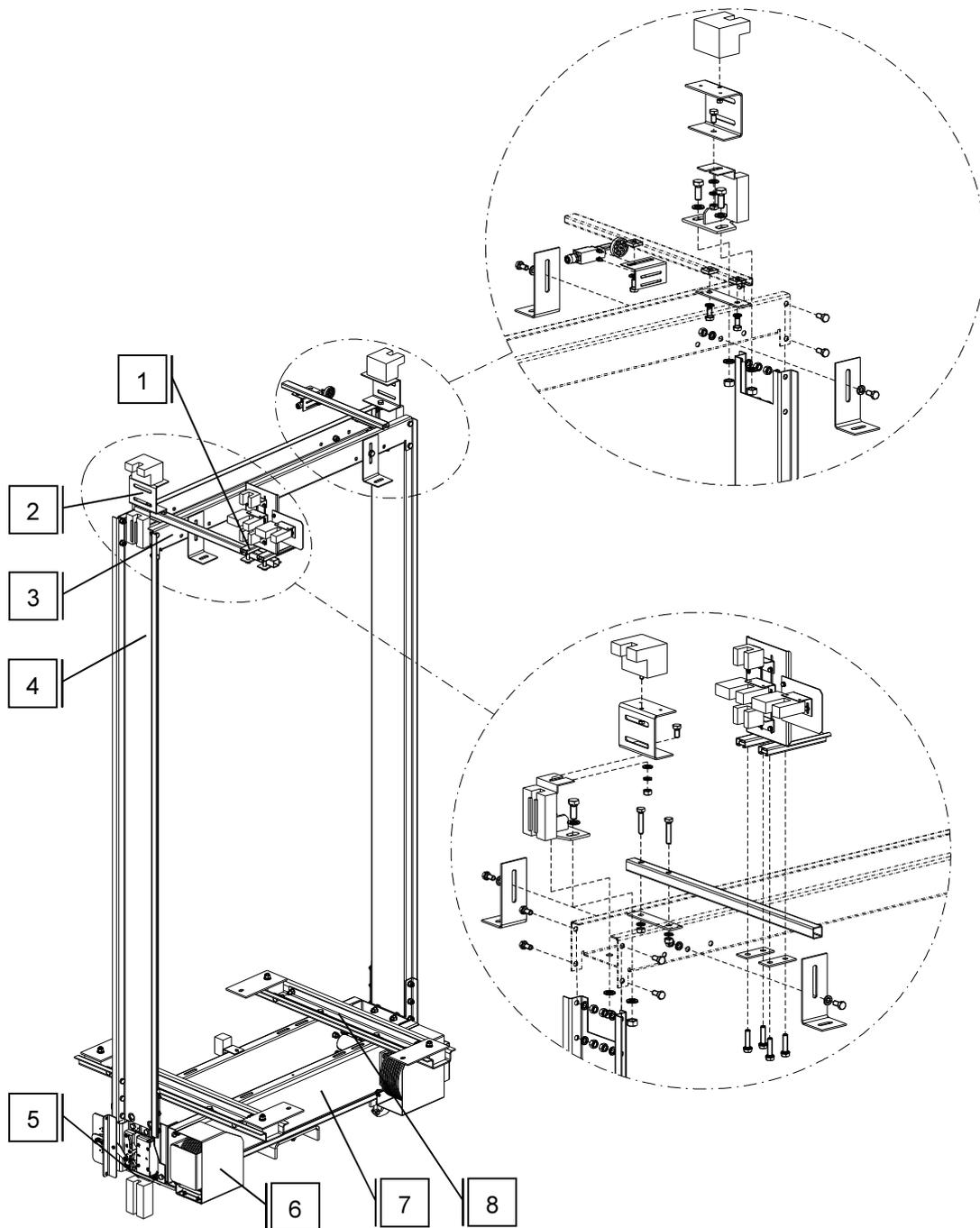


FIGURE 18

1. Landing indicator
2. Base for magnetic switches
3. Upper cross beam
4. Side cross Beam
5. Safety gear
6. Car sling pulley beam
7. Lower cross beam
8. Car sling cabin mount

6.8.3 Assembly of upper beam - side beam, cam and landing indicator installation.

CH-1000 Controller.

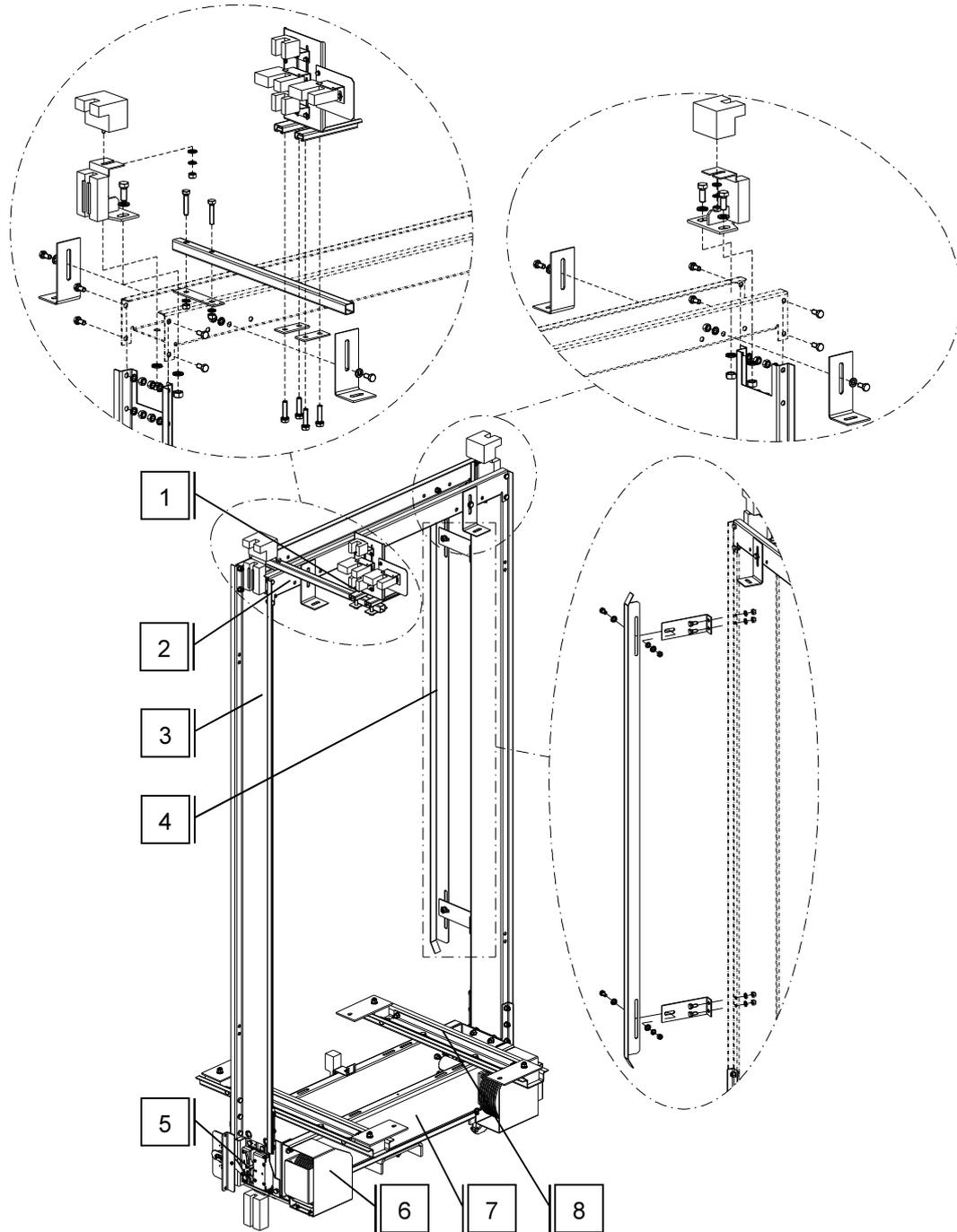


FIGURE 19

1. Landing indicator
2. Upper cross beam
3. Side cross Beam
4. Cam
5. Safety gear
6. Car sling pulley beam
7. Lower cross beam
8. Car sling cabin mount

6.8.4 Assembly of upper beam - side beam and cam installation. Lisa Controller.

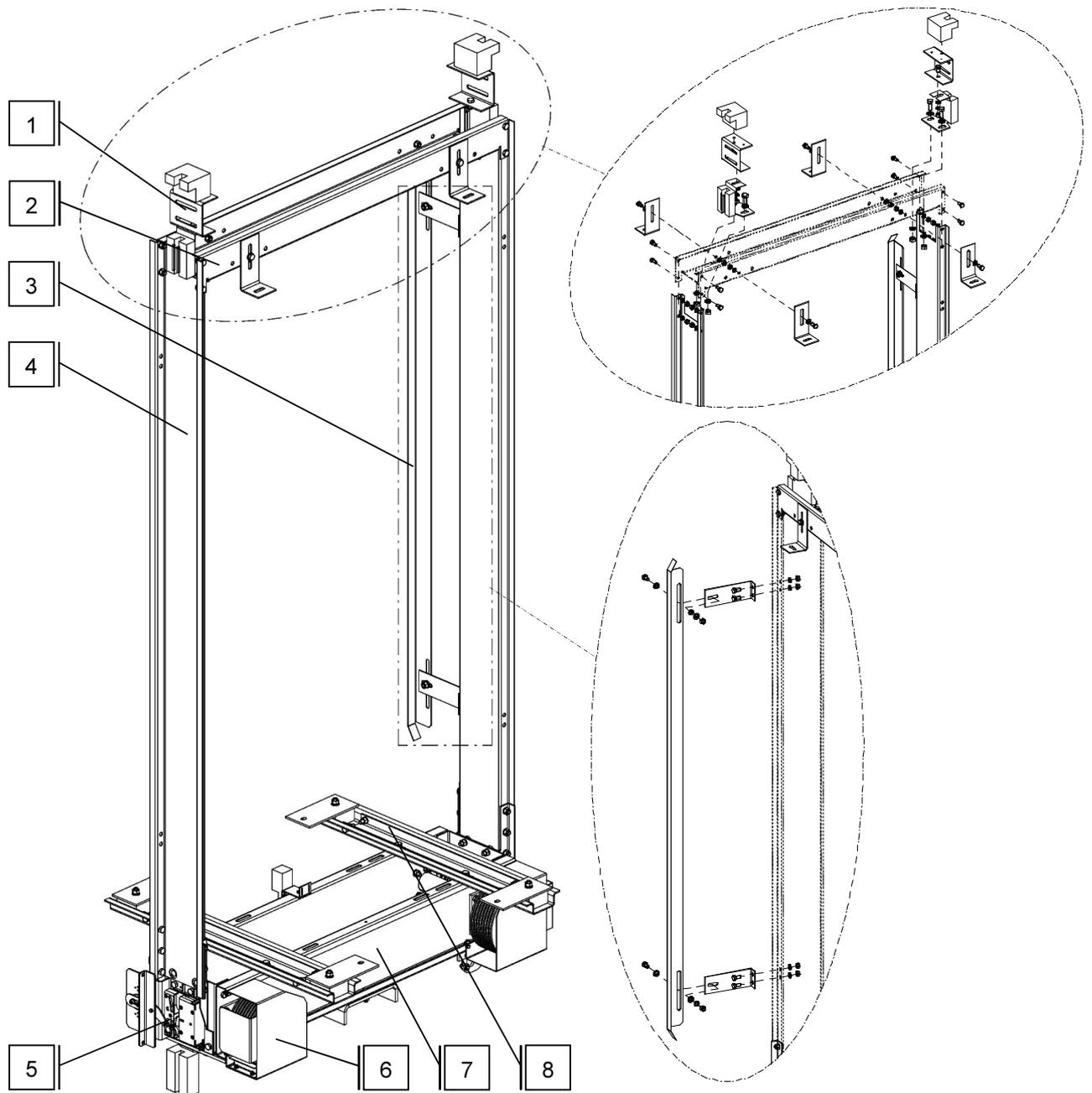


FIGURE 20

1. Base for magnetic switches
2. Upper cross beam
3. Cam
4. Side cross Beam
5. Safety gear
6. Car sling pulley beam
7. Lower cross beam
8. Car sling cabin mount

6.8.5 Assembly of lower cross beam.

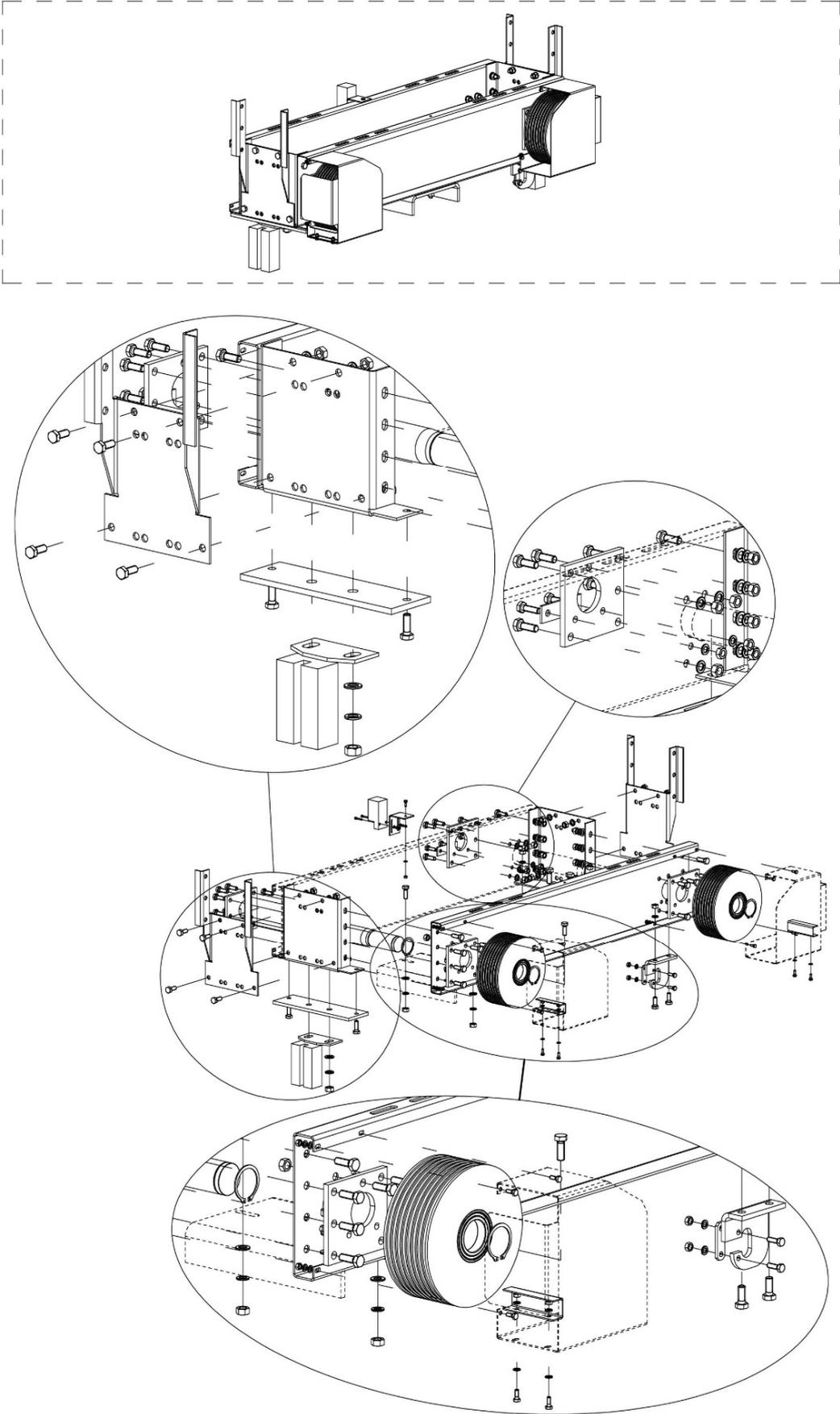


FIGURE 21

6.8.6 Installation of safety gear, lower cross beam – car sling cabin mount.

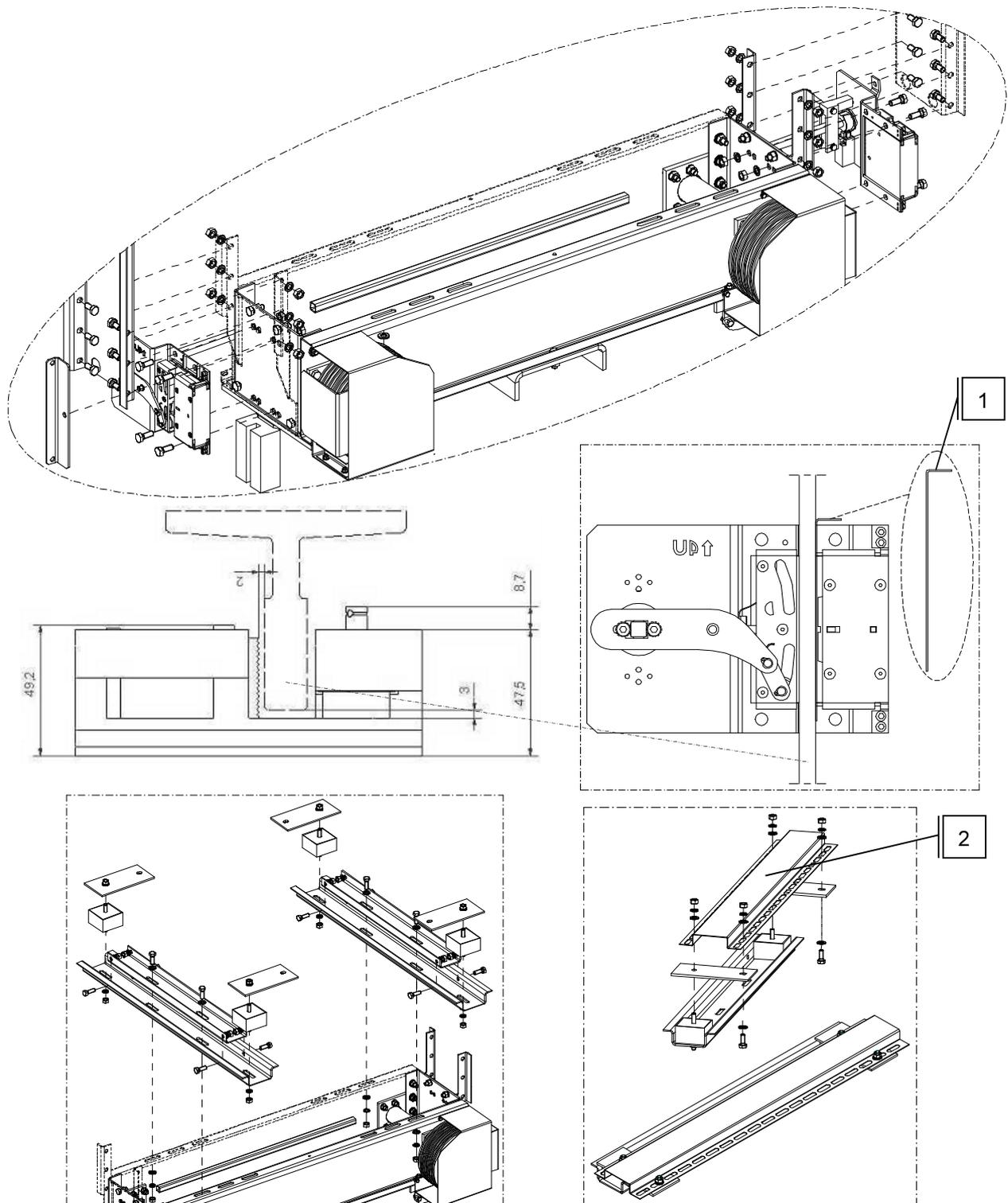


FIGURE 22

1. Safety gear adjustment plate. With the use of the safety gear adjustment (1) plate, adjust the safety gear according to its manual.
2. Horizontal transom of the cabin.

6.8.7 Revision and overload device installation.

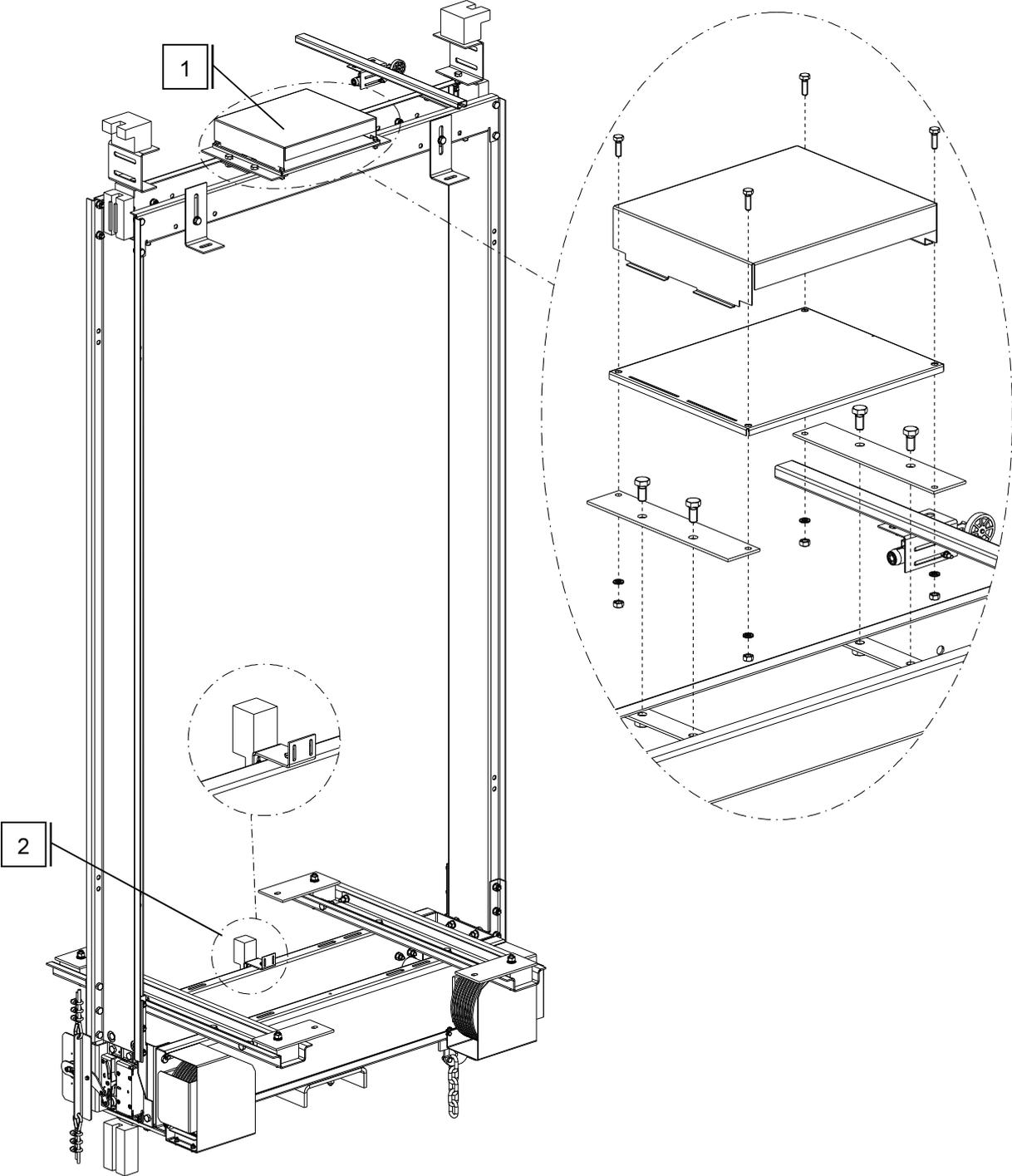


FIGURE 23

- 1. Revision
- 2. Overload Device

6.9 Installation of car and counterweight buffers.

6.9.1 Car speed up to 1.0 m/sec – Elastic buffers.

a) Without compensation chain.

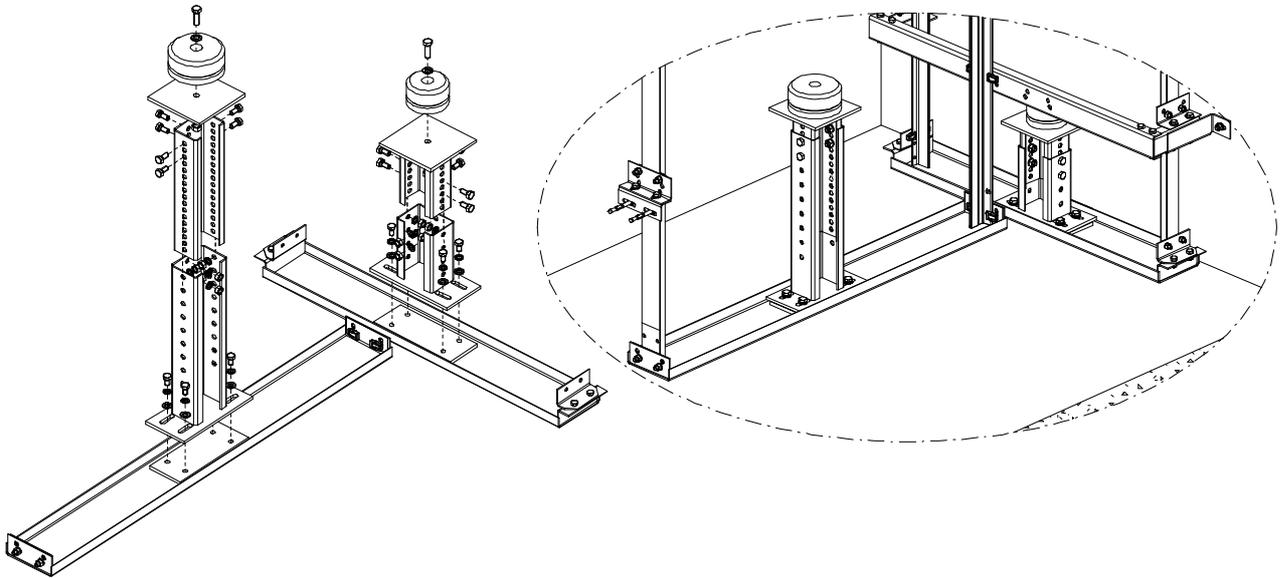


FIGURE 24

b) With compensation chain.

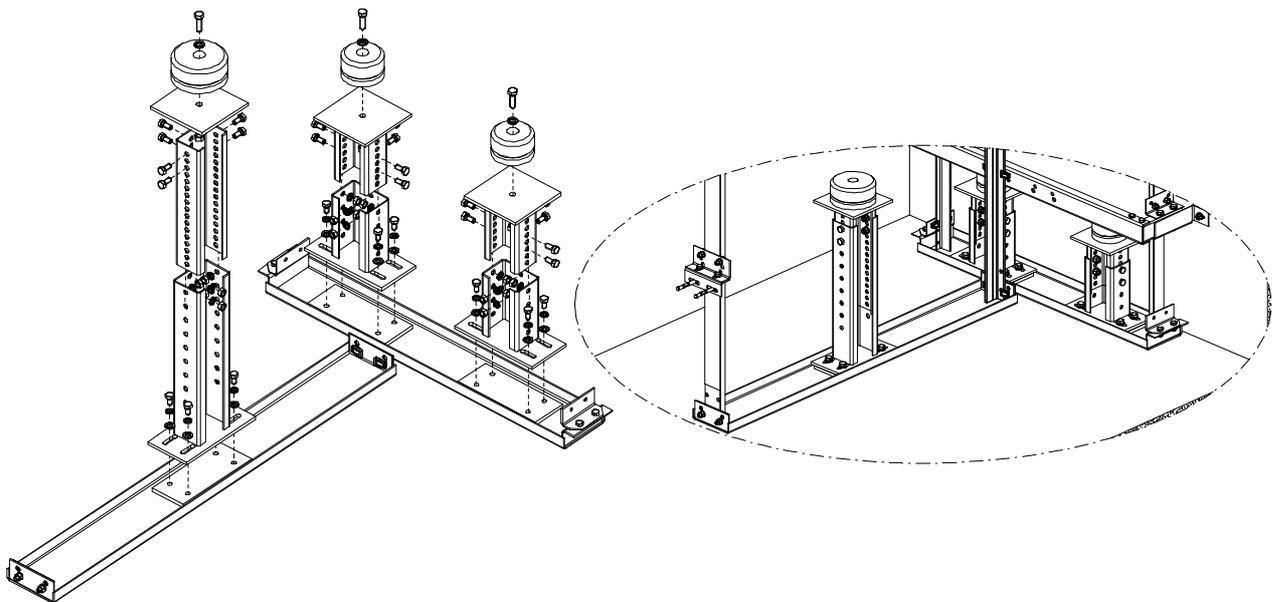


FIGURE 25

6.9.2 Car speed greater than 1.0 m/sec – Hydraulic buffers.

a) Without compensation chain.

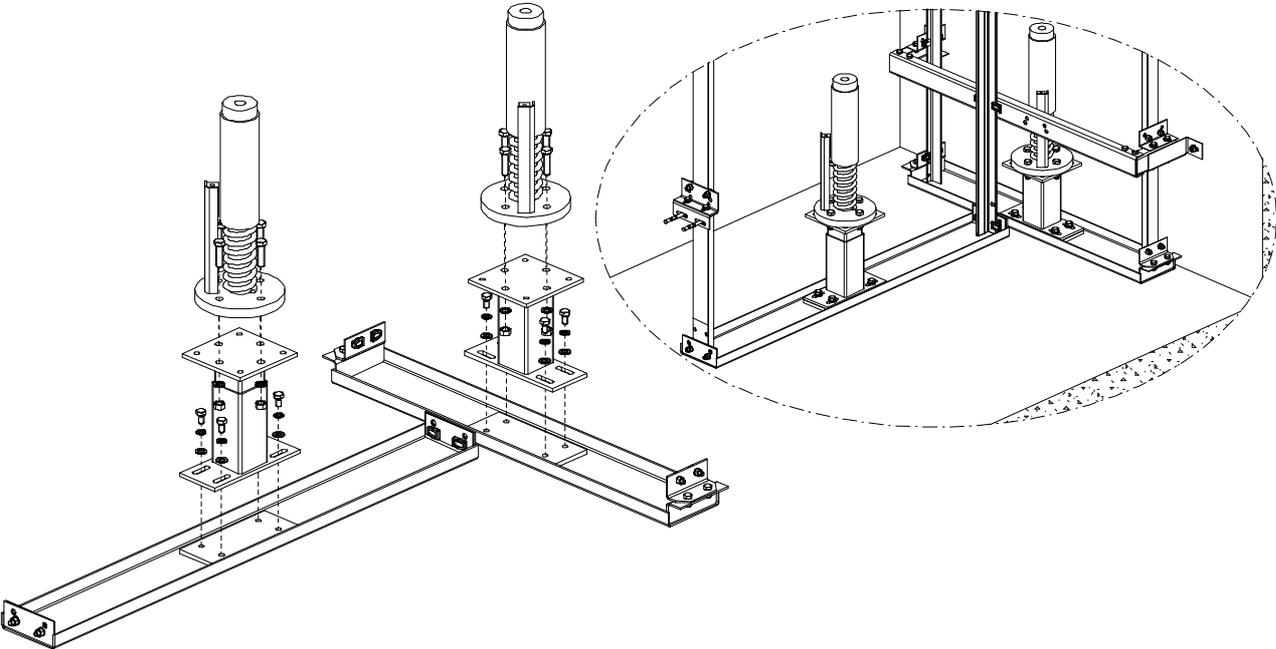


FIGURE 26

b) With compensation chain.

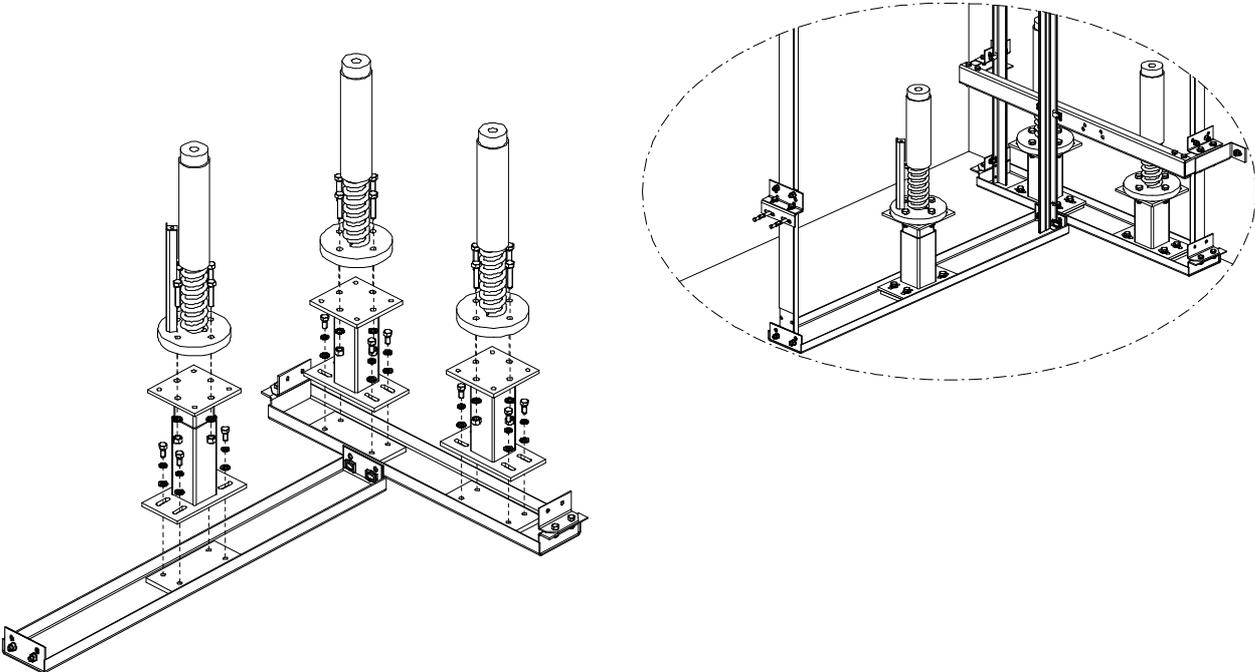
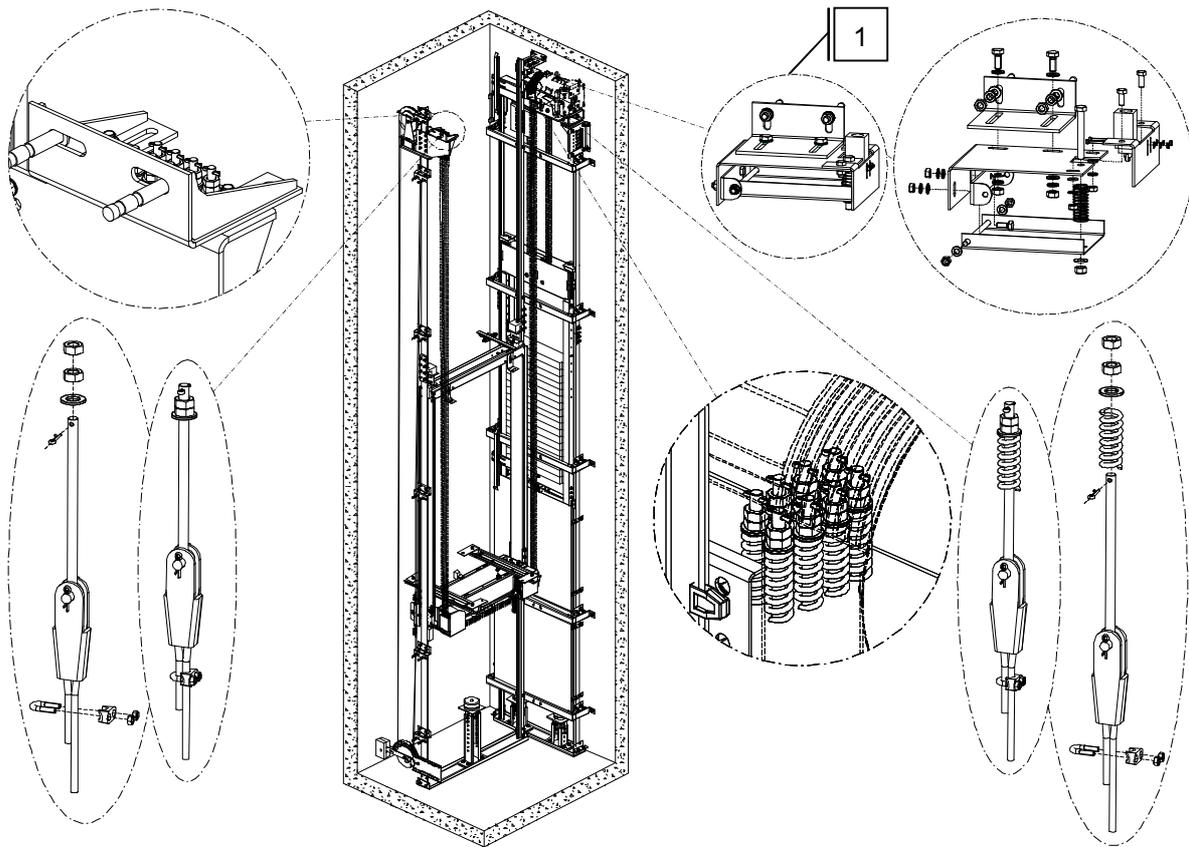


FIGURE 27

6.10 Rope attachment and installation of slack rope device.



1. The use of slack rope device is optional.

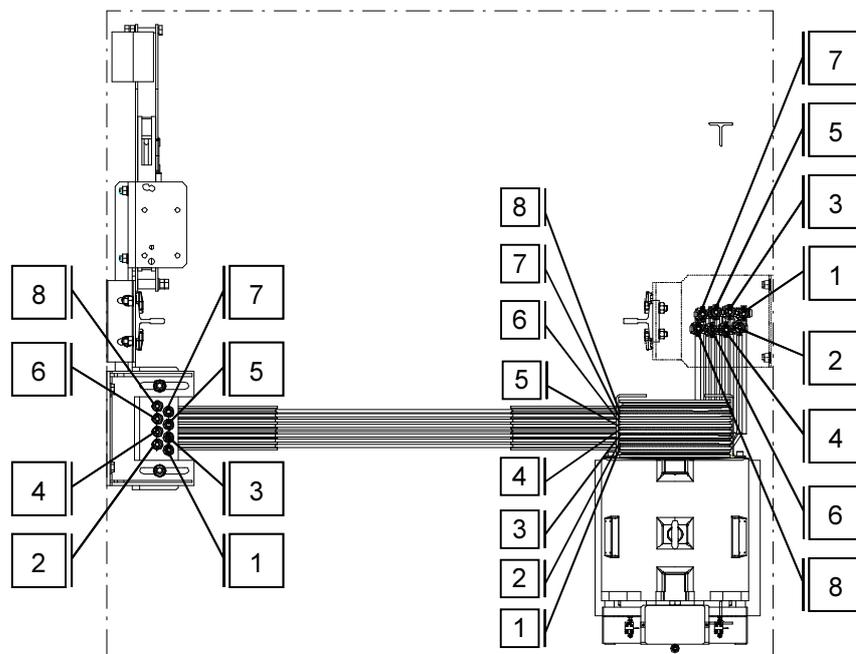


FIGURE 28

Caution: The spring on the wedge socket are placed only at the side of the counterweight frame.

6.11 Installation of overspeed governor.

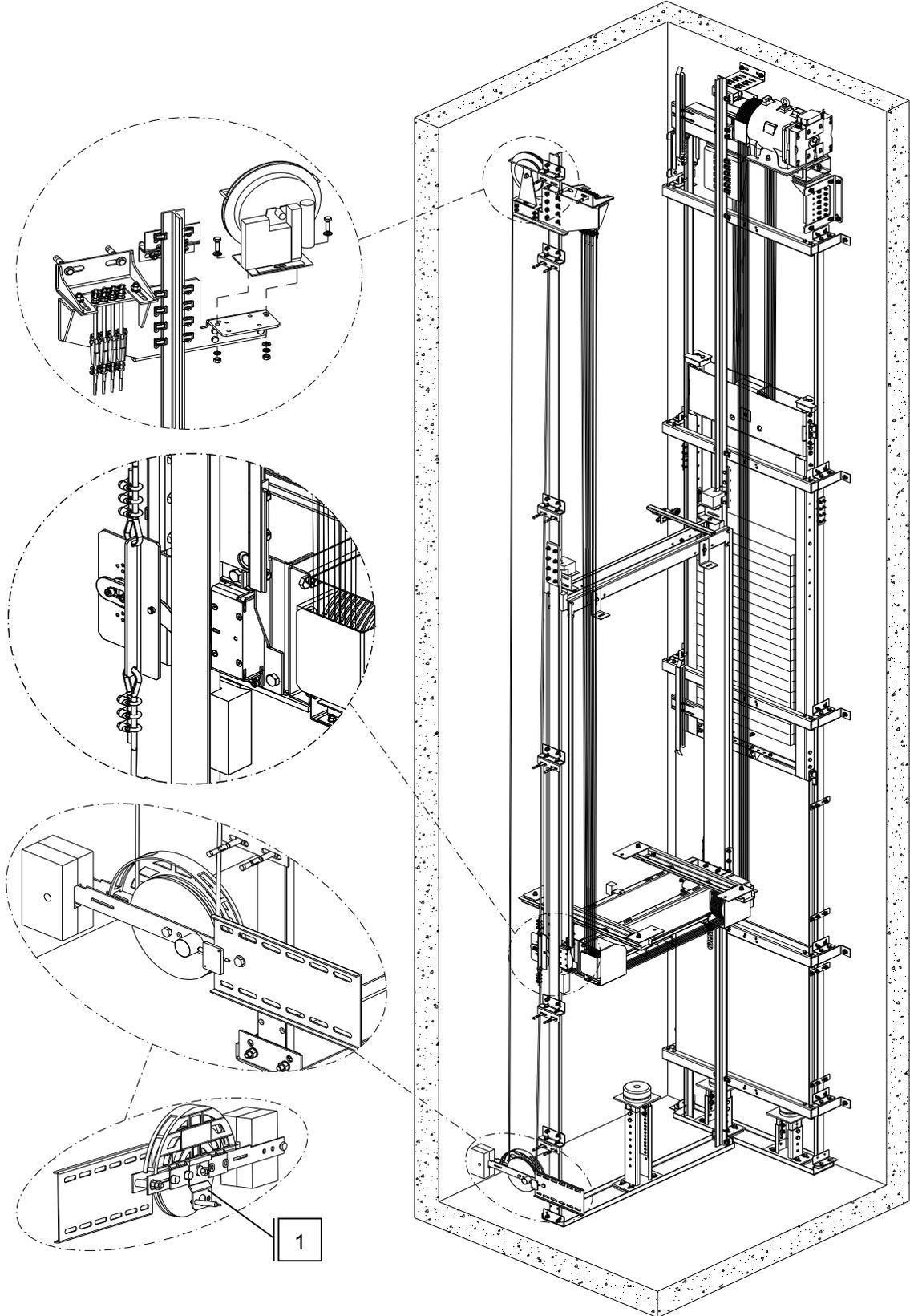


FIGURE 29

- 1. Base for the magnetic switch of overspeed tensioner

6.12 Installation of cam.
Serial MRL Controller.

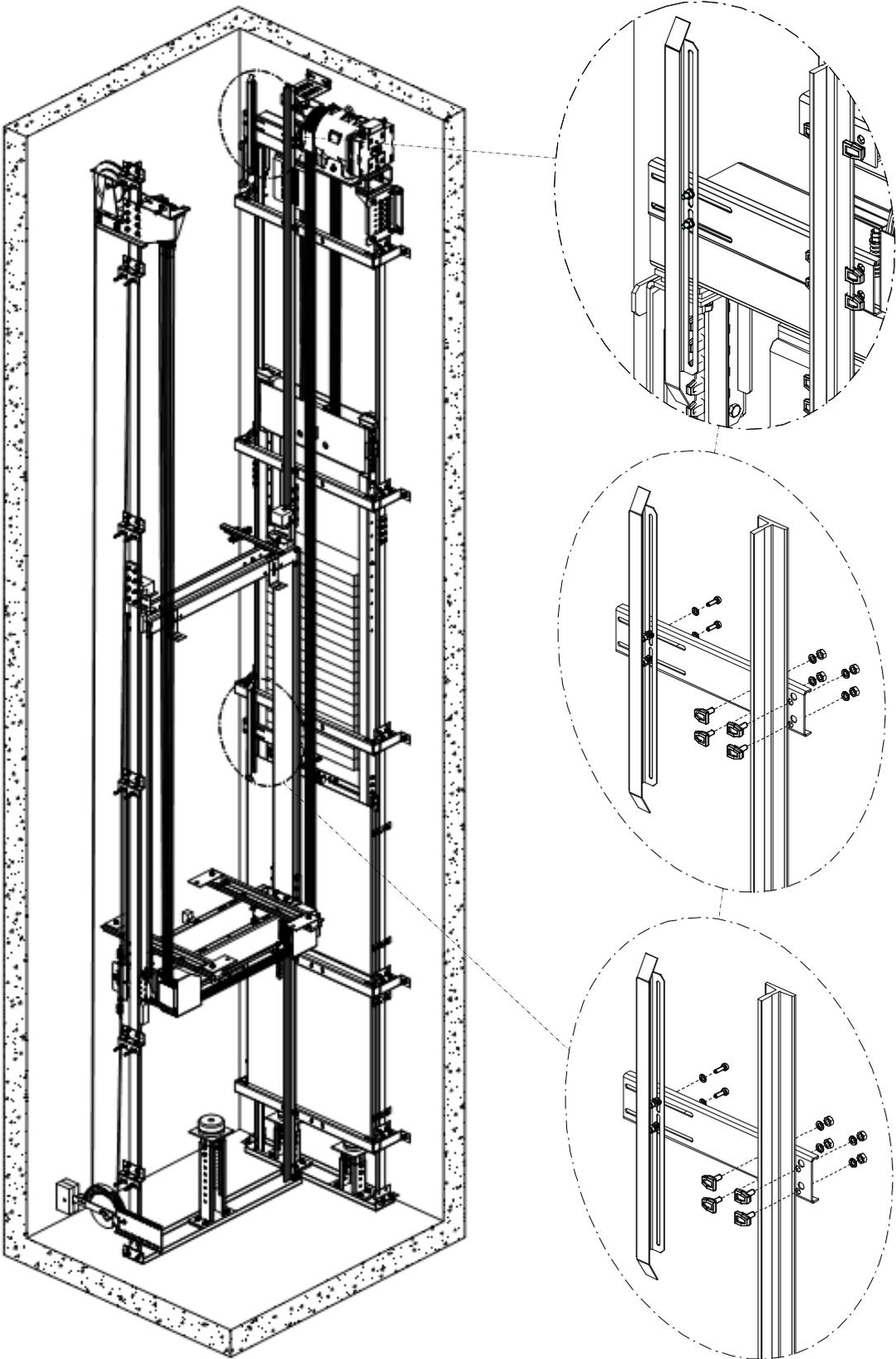


FIGURE 30

6.13 Installation of landing indicators and cam.
U-Control Controller.

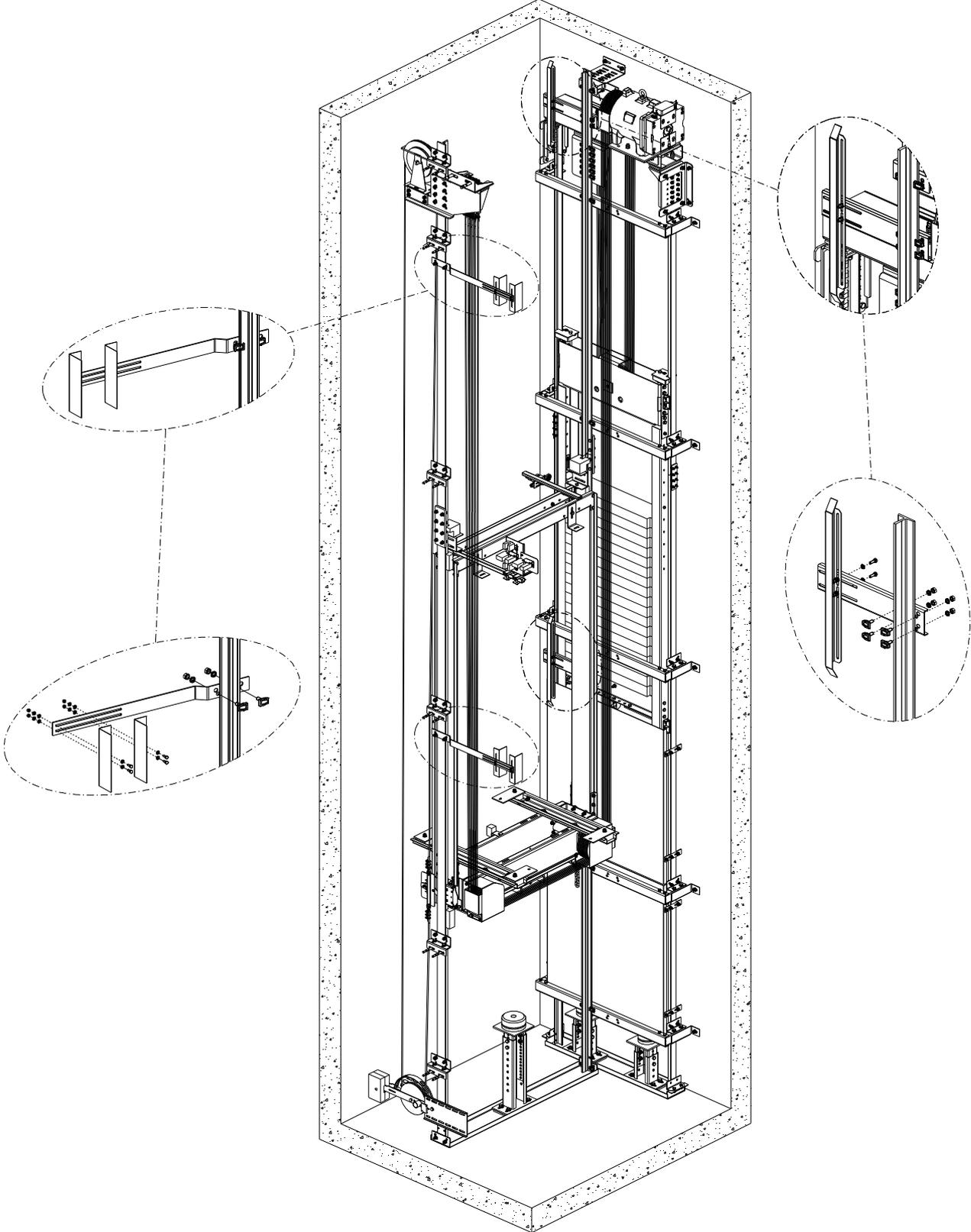


FIGURE 31

6.14 Installation of landing indicators and limit switches.
Controller CH-1000

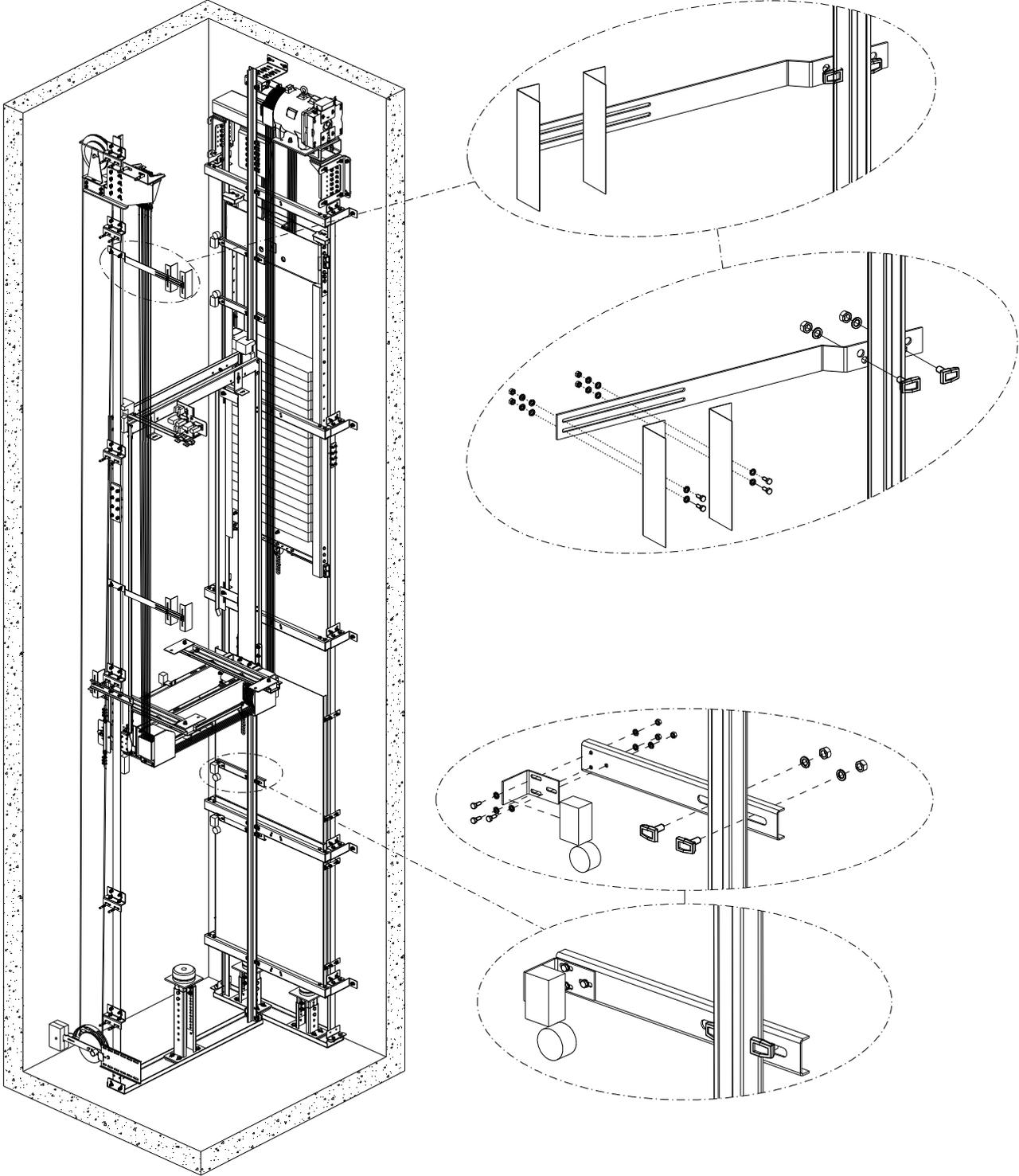


FIGURE 32

6.15 Installation of limit switches.
Lisa Controller.

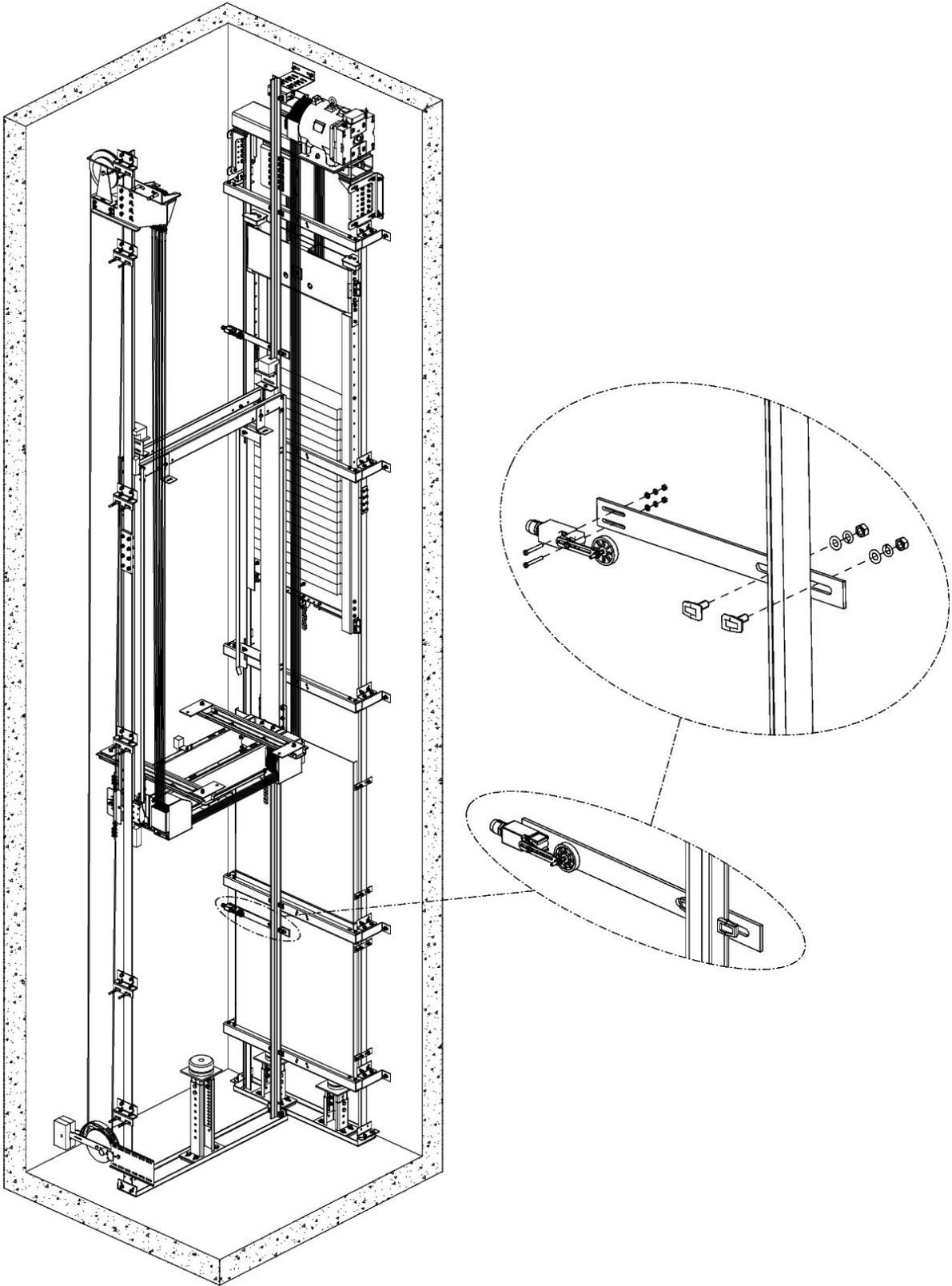


FIGURE 33

6.16 Installation of counterweight screen.

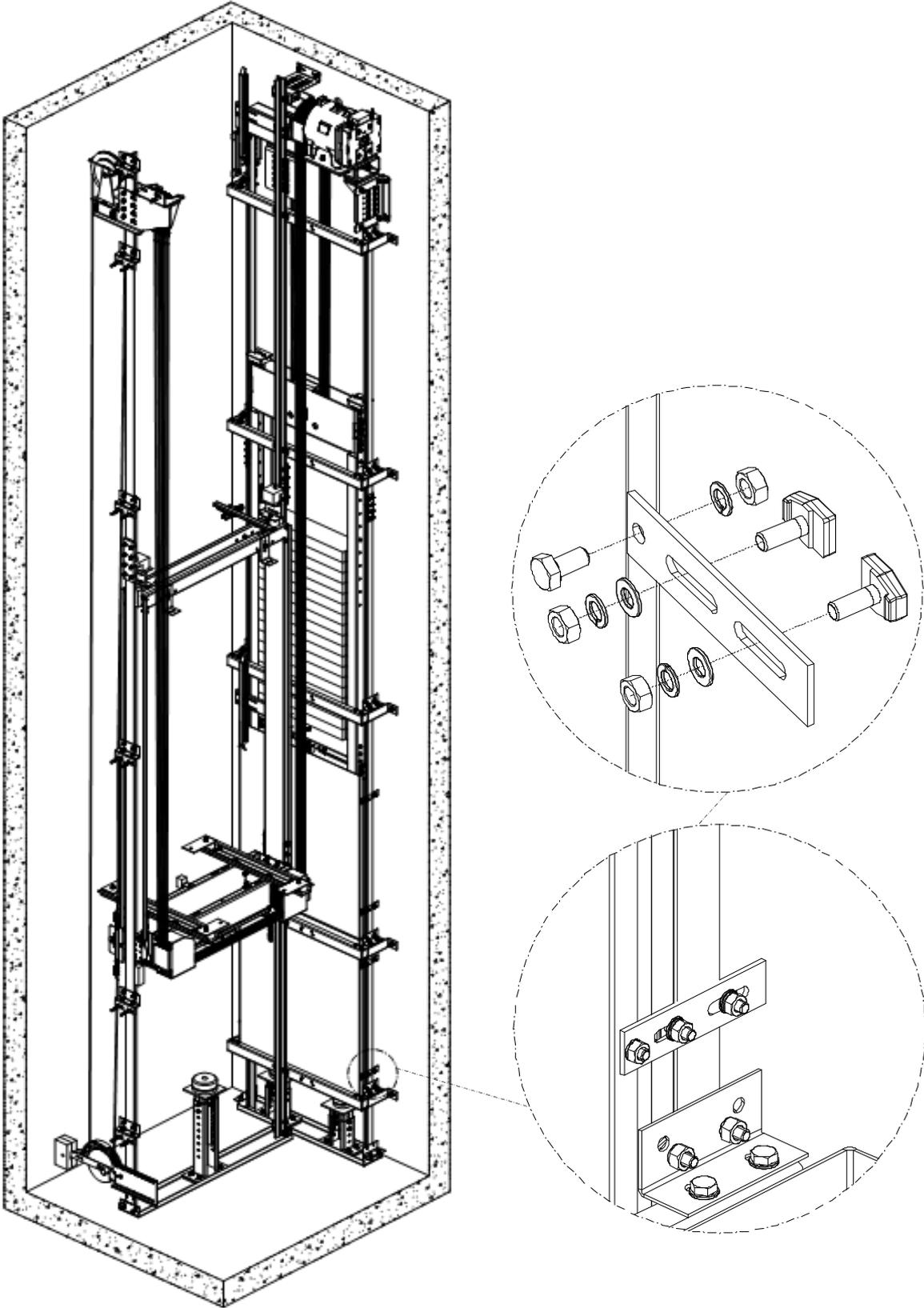


FIGURE 34

6.17 Recommended position of brake resistor and inverter.

a) When the controller is located at the door frame.

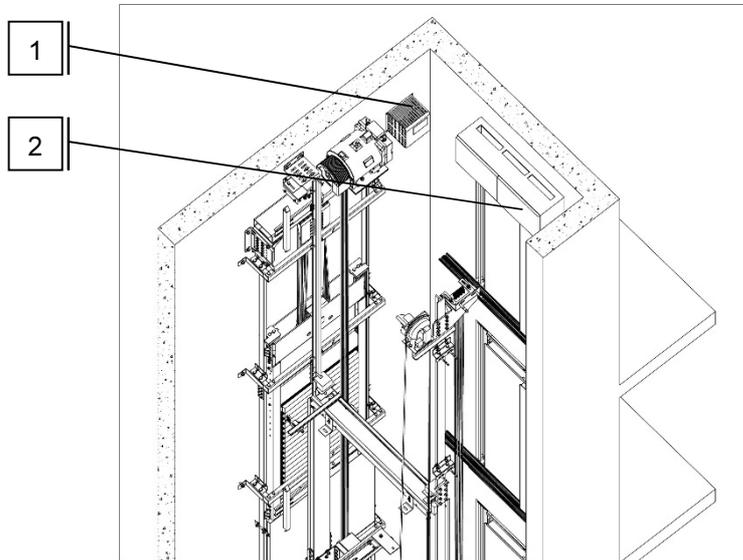


FIGURE 35α

1. Brake resistor position.
2. Cabinet for inverter.

b) When the controller is located at a cabinet next to the door, a notch on the shaft above the door is required.

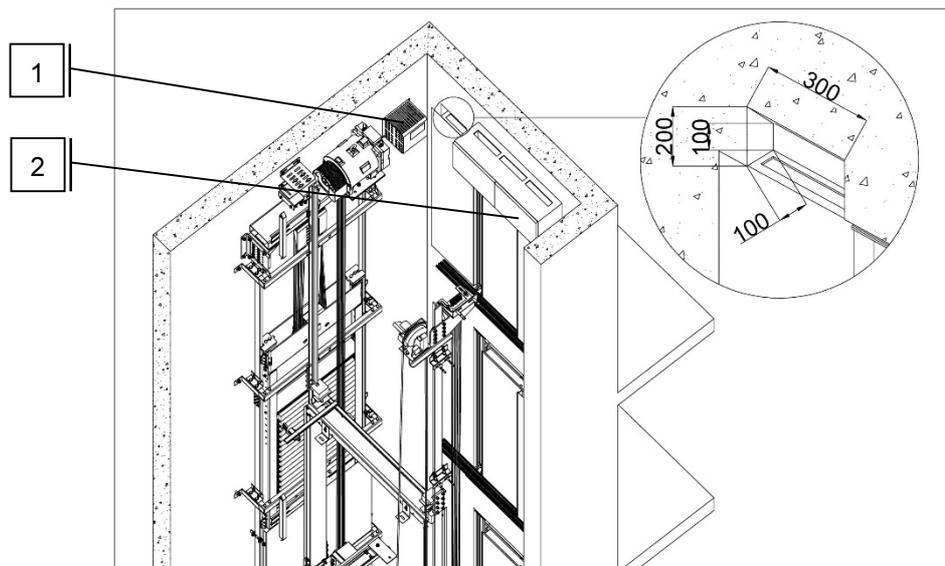


FIGURE 35b

1. Brake resistor position.
2. Cabinet for inverter.

6.18 Installation of the controller.

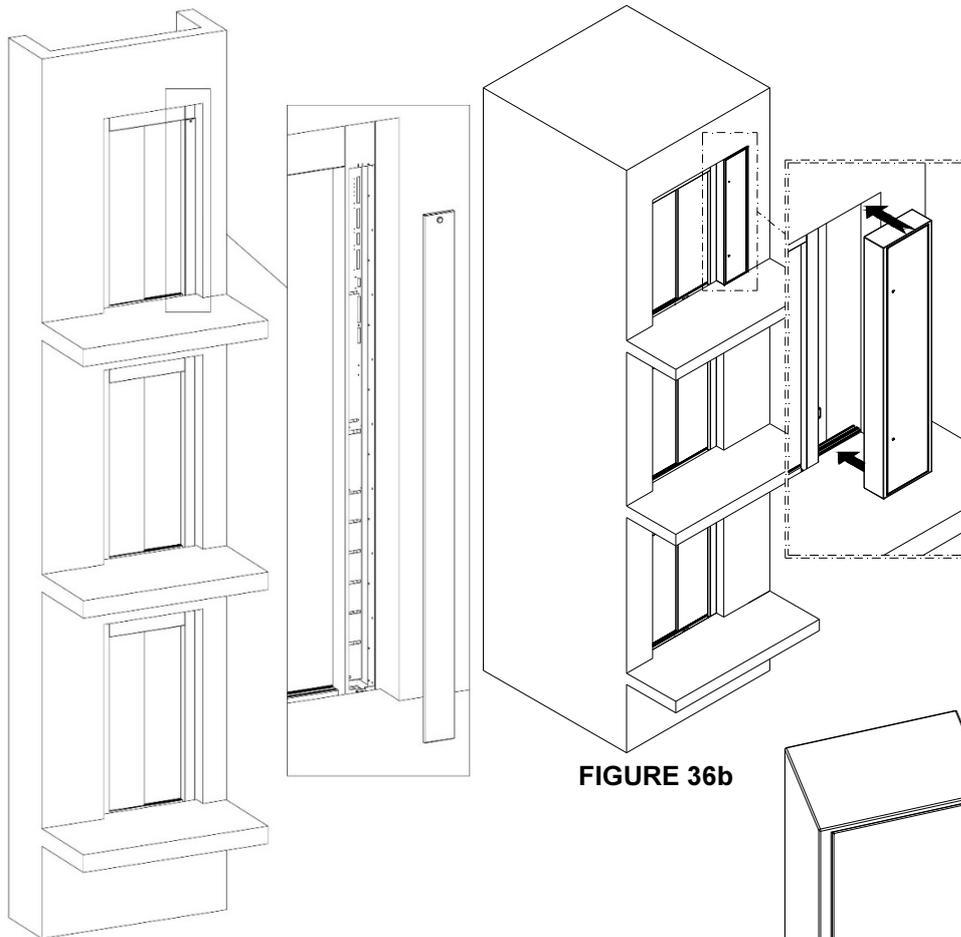


FIGURE 36a

FIGURE 36b

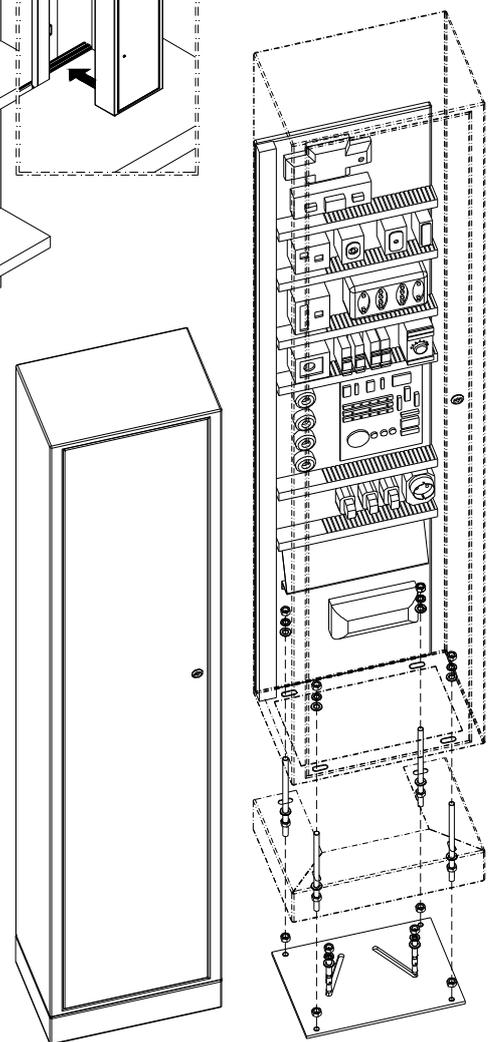


FIGURE 36c

- a) When the controller is located at the door frame (figure 32a).
- b) When the controller is located at a cabinet next to the door (figure 32b).
- c) When the controller is CH-1000 and the cabinet must be placed near the door, first place the cabinet upon its base and then support it at the ground (figure 36c)

6.19 Installation of compensation chain accessories.

a) Installation of compensation chain base at the car frame.

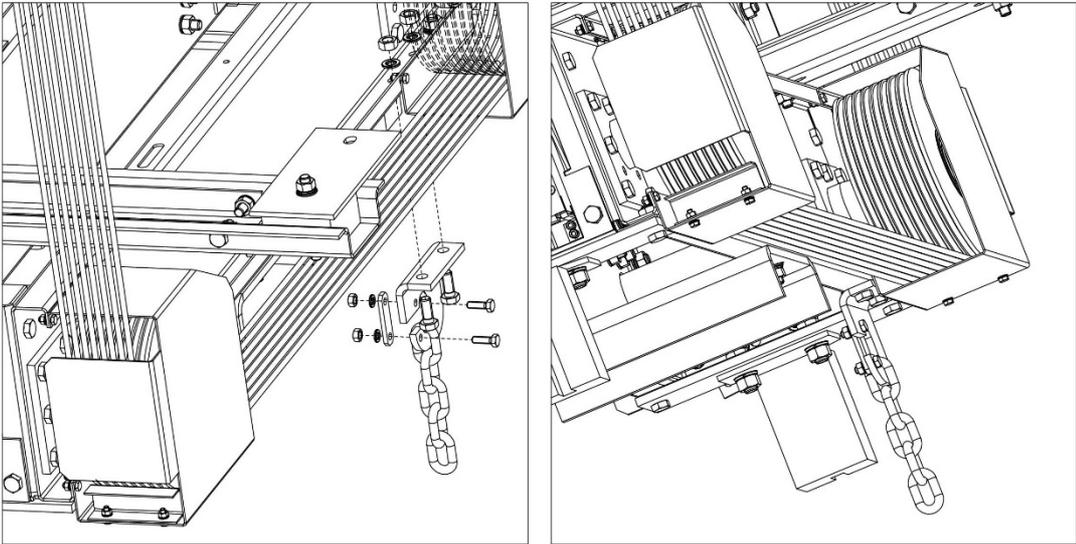


FIGURE 37a

b) Installation of compensation chain base at the counterweight frame.

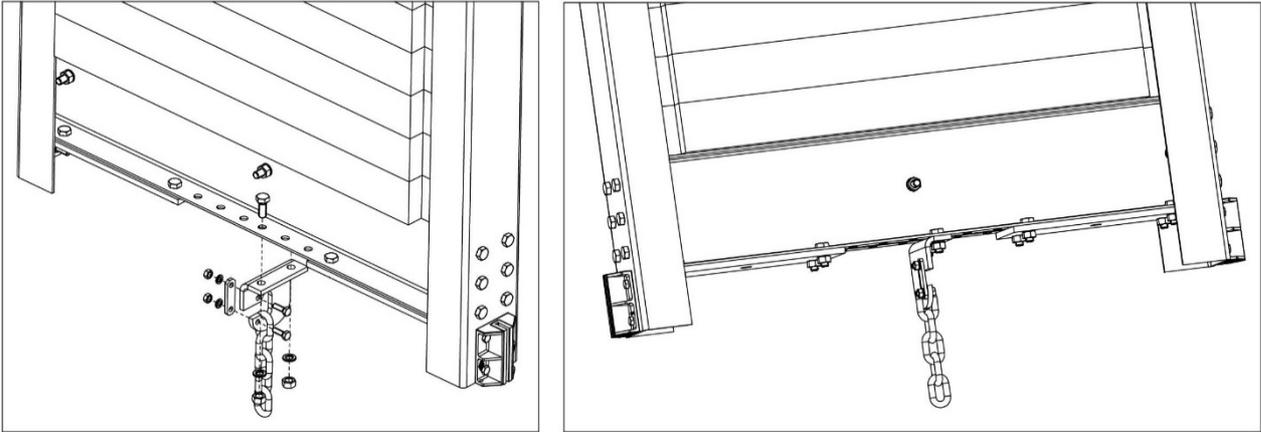


FIGURE 37b