LIFTINGITALIA S.r.l.
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LIFTINGITALIA
COMFORTABLE HOMELIFTS

IconLift

Electric screw driven platform lift with car

sample images

INSTALLATION AND COMMISSIONING INSTRUCTIONS

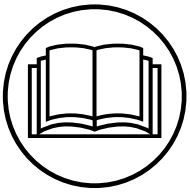
0.1	Update § 7.4, 12.7	11.11.2020
0	Nuova edizione	01.10.2019
Rev.	*Description*	*Date*

INDEX

2	General update	20.09.2017
1	General update	05.08.2016
Rev.	*Descrizione*	*Data*

PURPOSE OF THE MANUAL

The purpose of this manual is to provide correct information on the installation of the product, in order to contribute to personal safety and to the proper functioning of the system. Keep the manual for the entire life of the product. In the event of a change of ownership, the manual must be provided to the new user as an integral part of the product.

NOTICE	
	**READ THIS MANUAL CAREFULLY** before installing and using the product. This product must be installed and put into operation according to the provisions and regulations in force. Improper installation or improper use of the product can cause damage to people and property, as well as cause the warranty to lapse.
	FOLLOW THE SUGGESTIONS AND RECOMMENDATIONS TO OPERATE IN SAFETY. Any unauthorized modification can compromise the safety of the system, as well as the correct operation and the life of the machine. If you have any doubts regarding the correct understanding of the information and contents contained in this manual, contact LIFTING ITALIA S.r.l. immediately.
	QUALIFIED PERSONNEL: The product covered by this documentation can only be installed by qualified personnel, in compliance with the attached technical documentation, above all in compliance with the safety warnings and the precautions contained therein.
	Keep the technical and safety documentation near the system.

PERSONAL SECURITY AND RISK RECOGNITION

This manual contains safety rules that must be observed to safeguard personal safety and to prevent damage to the property. The indications to be followed to guarantee personal safety are highlighted by a triangle symbol while those to avoid material damage are not preceded by the triangle. The hazard warnings are shown as follows and indicate the different levels of risk in descending order.

RISK SYMBOLOGY AND PHRASES

RISK CLASSIFICATION AND RELATIVE GRAVITY OF DAMAGE		
DANGER	The symbol indicates that the failure to comply with appropriate safety measures **causes** death or serious physical injury.	RISK LEVEL
WARNING	The symbol indicates that the failure to observe the corresponding safety measures **can cause** death or serious personal injury.	
CAUTION	The symbol indicates that failure to observe the relevant safety measures **can cause** minor or moderate personal injury or damage to the device.	
NOTICE	It is not a symbol of security. It indicates that the failure to comply with relevant safety measures **can result** in property damage.	
INFORMATION	It is not a symbol of security. It indicates important information.	

If there are multiple levels of risk, the danger warning always indicates the highest one. If a warning is drawn with a triangle to warn to the risk of injury to persons, the risk of possible property damage may also be caused at the same time.

NOTE: During installation / maintenance of the platform, the safety functions are temporarily suspended. Therefore all necessary precautions must be taken to avoid personal injury and / or damage to the product.

MANUAL READING GUIDE

WARNING SIGN					
	GENERAL DANGER		ELECTRICITY DANGER		DANGER FLAMMABLE MATERIAL
	DANGER OF FALL BY A LEVEL		DANGER SUSPENDED LOADS		DANGER CORROSIVE SUBSTANCES

PROHIBITION SIGN					
	GENERIC PROHIBITION		FORBIDDEN TO STEP ON		PROHIBITED TO WALK ON OR STOP IN THIS AREA

MANDATORY SIGN					
	OBLIGATIORY TO WEAR THE PROTECTION HELMET		OBLIGATORY TO WEAR SAFETY SHOES		OBLIGATORY WEAR THE PROTECTIVE GLOVES
	OBLIGATORY TO WEAR EYE PROTECTION		OBLIGATION TO WEAR THE AUDIO PROTECTION		OBLIGATORY TO WEAR THE MASK
	OBLIGATORY TO WEAR PROTECTIVE CLOTHES		OBLIGATORY TO KEEP CLOSED		OBLIGATORY TO CHECK THE PROTECTIONS

EMERGENCY AND FIRST AID SIGNS		INDICATION SYMBOLS					
	FIRST AID		NOTA BENE		KEEP DRY		OBLIGATORY TO CHECK THE PROTECTIONS

LIABILITY AND WARRANTY CONDITIONS:

RESPONSIBILITY OF THE INSTALLER

The elevator / platform is produced and intended to be installed as described in the attached project drawing and in this manual; any divergence from the prescribed procedure may affect the operation and safety of the system and cause the immediate cancellation of the warranty.

Any modification or variation made to the project and the to the assembly Instructions must be documented in detail and referred to LIFTING ITALIA S.r.l., in order to allow the company an adequate assessment. Under no circumstances can a modified system be activated without the express authorization of LIFTING ITALIA S.r.l.

Installers are responsible for ensuring compliance with safety procedures at work and any health and safety regulations in force in the country and on the site where the assembly is carried out.

The elevator / platform must only be used in the way envisaged by the system and illustrated in the relative manuals (transportation of people and / or things, maximum loads, cycles of use, etc.). LIFTING ITALIA S.r.l. assumes no responsibility for damage to persons and property caused by improper use of the system.

NOTE: Pictures and images on this manual are for illustration purposes only.

1. GENERAL DISPOSITIONS AND INSTALLATION SITE MANAGEMENT

1.1. GENERAL DISPOSITIONS

IMPORTANT!

For more information on safety, liability and warranty conditions, receipt and storage of material on site, packaging, waste disposal, cleaning and storage of the product; refer to the "**SAFETY INSTRUCTIONS AND SITE MANAGEMENT**" manual.

NOTICE

PRELIMINARY CHECKS: Once the packaging has been opened, check that the product is intact and has not been damaged during transport. Should any anomalies or damage be found, please dispatch them in writing on the transport document to the transport company, giving written notice to LIFTINGITALIA S.r.l.

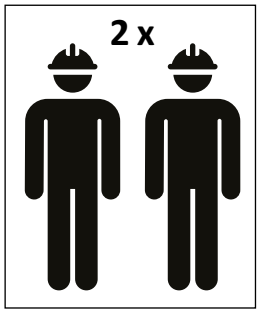
NOTE: In this manual, we will talk about "SHAFT" meaning for it the base slab, the slab of landing and the vertical wall that connects its slabs.

⚠ CAUTION

SAFETY AND SITE MANAGEMENT - OVERALL DISPOSITIONS:

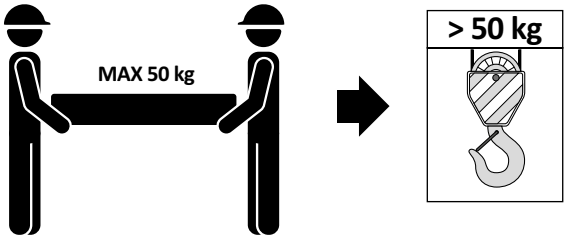
1. Always secure tools and any objects against falling;
2. Pay the utmost attention to all the steps described in this;
3. While assembling the parts making up the system or after installation, be careful of any sharp burrs (machining residues);

- Before proceeding with the installation, it is necessary to remove the rubble and the material deposited during the construction of the shaft.
- Only nuts and bolts included in the supply must be used.
- The bags containing the screws must be opened in correspondence with the respective operating phases indicated in this manual.
- The instructions described in this manual refer to a reinforced shaft, to a fastening with mechanical expansion plugs of the stud type. For the use of plugs in masonry other than the reinforced concrete see the attachment to this manual. For the shafts with metal framework, we proceed by replacing the plugs with normal screws.
- In these instructions and on the wiring diagram, the stops are indicated with 0, 1, 2, 3, meaning "0" the lowest stop: the numbers on the push-button panels may be different according to the user's needs (for example- 1, 0, etc.).



The assembly must be performed by a MINIMUM 2 people;

If the load is greater than 50kg, use the hoist for handling.

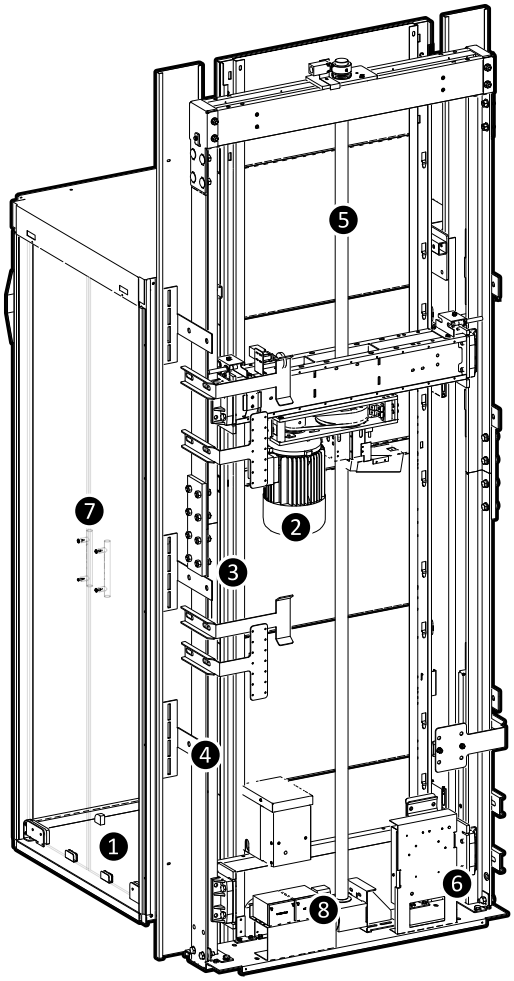


2. PRODUCT DESCRIPTION

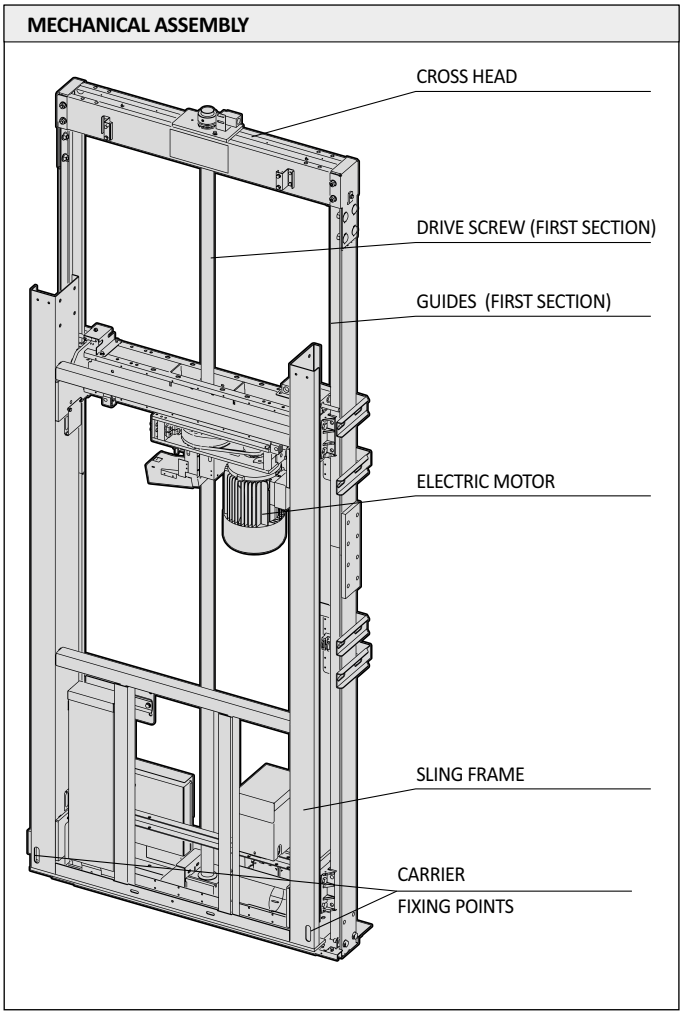
2.1. GENERAL DESCRIPTION AND TERMINOLOGY

IconLift is a design lifting platform, projected for home comfort, with a maximum stroke of 12 m.
The platform ❶ is moved by the electric motor ❷, positioned inside the car sling. The car sling-cab assembly is held in place by two metal guides ❸ fixed to one of the walls of the shaft by means of the special system of brackets and counter-brackets ❹ and moved by means of a screw drive system ❺ during all its movement inside the shaft.
The shaft can be made in masonry or with a metal frame, both inside and outside buildings.
The electric motor, controls and manoeuvres are managed by the electric panel integrated on the platform, which receives commands from the push-button panel and from the electromotive force panel.
The safety of the cab for maintenance operations in the pit is ensured by the interaction of the special mechanical device ❻ and the pit stop ❽.
Floor landings are closed by automatic landing doors.
To avoid the risk of shearing, there are sensitive edges or car doors ❼

The lift platform offers a wide range of installation possibilities with multiple variants compliant with the following reference standards:
2006/42/EC Machinery Directive;
EN81-41:2010 European standard for lifting platforms.



sample images

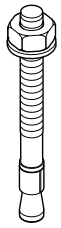


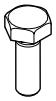
LIFTING ITALIA S.r.l. goal is to promote the continuous improvement of its products and consequently their technical specifications may be subject to change without notice or commitment.

INFORMATION 3. BOX CONTENT - SCREWS KIT

NOTE: Each "KIT" box with its identification code represents the packaging unit, i.e. how many pieces per type are contained in each package.

KIT F350.23.0010V03
TYPE 25 WALL FIXING KIT – OPTION 2


4 x M10x90

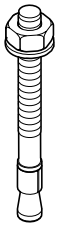

4 x M10x30


4 x M10


8 x Ø10


4 x Ø10

KIT F350.23.0034
DOOR FIXING KIT


8 x M10x90

KIT F352.23.0001
SCREW LUBRIFICANT KIT

2 x

KIT F350.23.0016
BRACKET-FIXING TO STRUCTURE AND WALL KIT

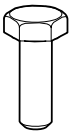

4 x M10x30


8 x Ø10


4 x Ø10


4 x M10

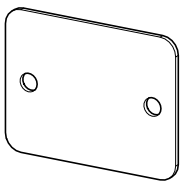
KIT F352.23.0002
CAR SLING BASE FIXING KIT


14 x M10x40

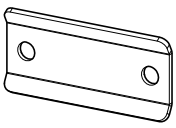

14 x Ø10

ASSEMBLY F352.03.0064
FLAT CABLE FIXING ASSEMBLY FOR MASONRY

1 x

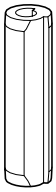


1 x

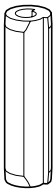



2 x M10x90

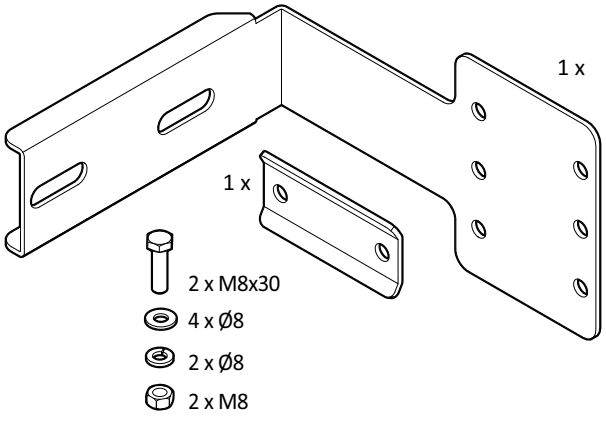
KIT F352.23.0003
INTERMEDIATE SCREW FIXING KIT


2 x Ø8x30

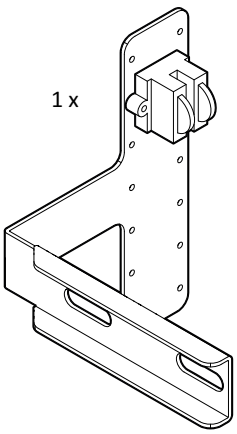
KIT F352.23.0004
UPPER SCREW FIXING KIT


1 x Ø8x60

ASSEMBLY F352.03.0052
FLAT CABLE FIXING ASSEMBLY FOR STEEL STRUCTURE



ASSEMBLY F352.03.0055
ASSEMBLY SUPPORT BRACKET FOR FLOOR SENSOR



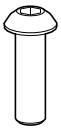
KIT F352.23.0005

INTERMEDIATE FIXING KIT SAFETY PANELS GUIDE

24 x M5x10

KIT F352.23.0010

CAR WALL FIXING KIT

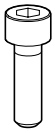


10 x M6x20

KIT F352.23.0007

PANEL FEM FIXING KIT

4 x Ø4.5x40



4 x M6x20

4 x M6

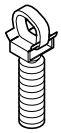
8 x Ø6

4 x Ø6

KIT F352.23.0011

SAFEPIT TRIGGERING DEVICE FIXING KIT

3 x



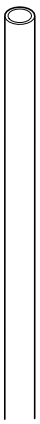
2 x Ø7

2 x Ø6

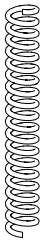
1 x Ø6-18

1 x

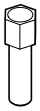
1 x



1 x



4 x M5x16



2 x M6x28

1 x Ø2

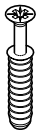
4 x M5

3 x M6

1 x Ø3

KIT F352.23.0012

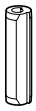
NYLON PLUGS KIT



25 x M4x30

KIT F352.23.0013

SPARE FIXINGS KIT



2 x Ø8x30

1 x Ø8x60

KIT F352.23.0008

LATERAL PANELS FIXING KIT

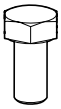
4 x M4x35

4 x M4

4 x M4

KIT F352.23.0009

CENTRAL SAFETY PANELS GUIDES FIXING KIT



4 x M4x20
4 x M6x20

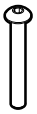
4 x M4

4 x Ø4
4 x Ø6

4 x Ø4
4 x Ø6

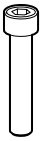
KIT F352.23.0014

PARAPET FIXING KIT

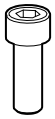


8 x
TBEI M4x25

2 x
TBEI M6x20



8 x
TCEI M6x30



2 x
TCEI M8x20

8 x
4x10

2 x M6

2 x Ø 6

2 x Ø 6

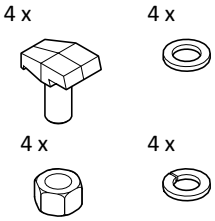
KIT F352.23.0018

OPERATING PANEL ON TUBULAR SUPPORT KIT

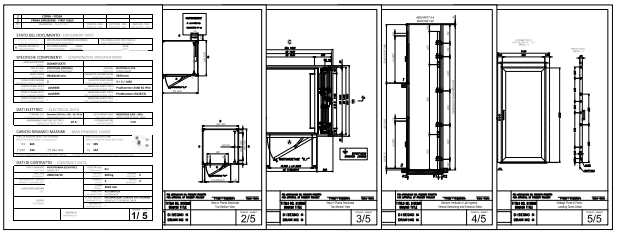
3 x M3.9x19

KIT V0301.04.0001V03

GUIDES FIXING KIT

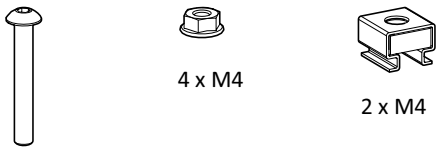


LAYOUTS



KIT F352.23.0020

SAFEPIT TRIGGERING DEVICE FIXING KIT



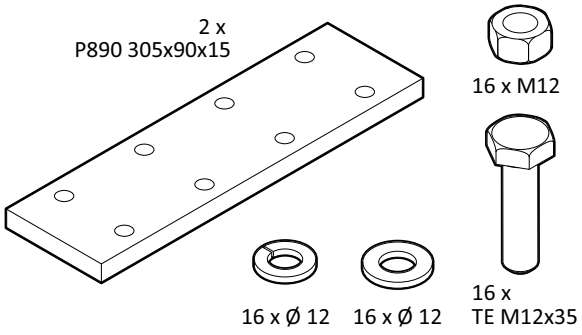
6 x M4x35

4 x M4

2 x M4

KIT V0300.23.0001V09

JUNCTION GUIDES KIT

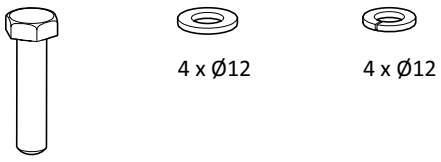


INFORMATION

Car assembly KIT to order.

IN THE PACKAGING OF THE STRUCTURE (covered in this manual)

KIT S001.23.0003

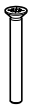


4 x M12x50

4 x Ø12

4 x Ø12

KIT S102.23.0003



M4.2x25

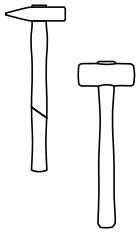
KIT S000.23.0007

50 x

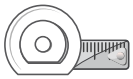
M4.8x13

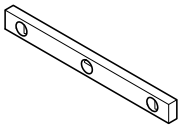
INFORMATION 4. TOOLS REQUIRED FOR INSTALLATION

Hammer



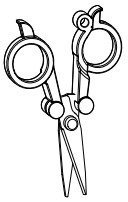
Tape measure





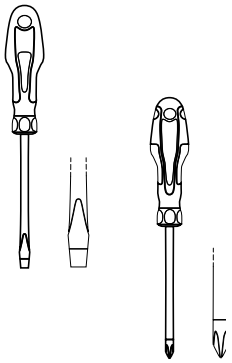
Spirit level

Scissors for electricians



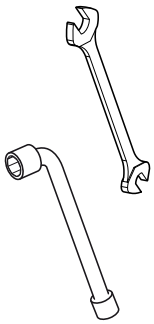
Flat-blade screwdriver

Phillips screwdriver



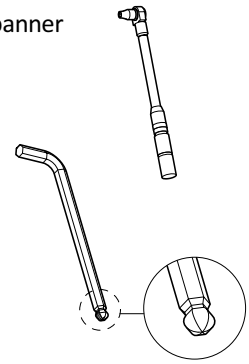
Spanner
CH 5 ÷ 27 mm
2 each size

Socket wrench
CH 5 ÷ 27 mm



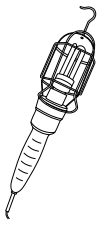
Ratcheting ring spanner
S 13 ÷ 19 mm

Allen key
with ball end
2,5 to 8 mm

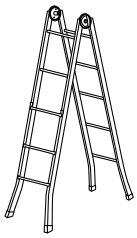


Adjustable pliers

Portable lamp

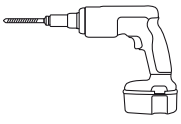


5 steps collapsible or platform safety ladder



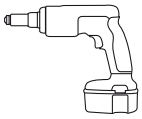
Lifting belts, load ≥ 500 kg, length ≥ 2 m

Drill

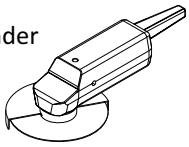


for Brickwork 6 to 22 mm
Metal 2 to 13 mm

Screwdriver
CH 6 ÷ 10 mm

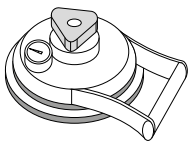


Corner grinder



· cutting disks
· metal grinding disks

Suction cups
100 kg/each



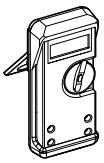
Manual hoist, load ≥ 500 kg, length ≥ 15 m

Insulating tape

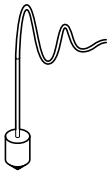
Double-sided adhesive

Chronometer

Digital multimeter



Plumb bob



5. PRELIMINARY CONTROLS

5.1. PRELIMINARY SAFETY CHECKS

WARNING

BEFORE STARTING THE INSTALLATION, YOU NEED:

- Check that the main electrical system is up to standard and provided with adequate grounding; **Otherwise, stop the installation until the Customer has made the system up-to-date.**
- Check the presence of an efficient lighting system at the place of installation;
- Check the cleanliness of the shaft and pit and that there are no liquids (water, oil, ...) on the bottom;
- Check that the entrances to the work areas are properly closed;
- Check that all the holes and the housings for the electric cables are free, inspectable, well finished and dry;
- Check that there is adequate ventilation for the smoke exhaust;

5.2. PRELIMINARY CHECKS OF THE INSTALLATION SITE

NOTICE

BEFORE STARTING THE INSTALLATION CHECK THE FOLLOWING MEASURES AND COMPARE THEM WITH THOSE ON THE PROJECT DRAWING:

- Width (distance between the side walls)
- Depth (distance between front and back wall)
- Pit depth
- Travel
- Headroom height
- Plumbing of the shaft and any plumb parts already installed
- Dimensions of any necessary arrangements (breaking down the landing doors, distance between the guides,
- Determine the finished floor level of each floor;

Measure the width and length of the shaft at all levels. Perform the dimensional checks independently of the measurements taken by the building manufacturers.

5.3. OBLIGATIONS OF THE INSTALLER

BEFORE STARTING THE INSTALLATION, YOU NEED:

- Arrange a material deposit area near the work area, easily accessible and protected from the bad weather;
- Prepare any lifting equipment to be used;
- Check the presence of all materials, using the list;
- Check the state of all materials at the time of receipt on site and in case of damage or missing contact the supplier immediately;
- Periodically check the materials destined for long storage before installation to avoid possible deterioration caused by incorrect storage;
- Check the completeness of the attached documentation

6. OPERAZIONI PRELIMINARI

6.1. POSITIONING OF MATERIAL ON SITE

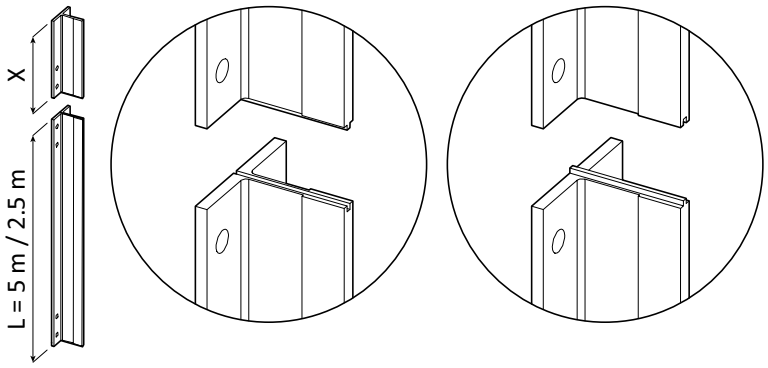
NOTICE

MATERIAL POSITIONING:
It is important to position the material correctly on the installation site as once the scaffold has been assembled it may become difficult to handle certain components, with the risk of injury and damage to the materials.

DOORS
Each door must be positioned close to where it is to be installed and therefore each door to its reference floor.

PROTECTIVE PANELS
Divide the protective panels on each floor in such numbers that they are easy to install.

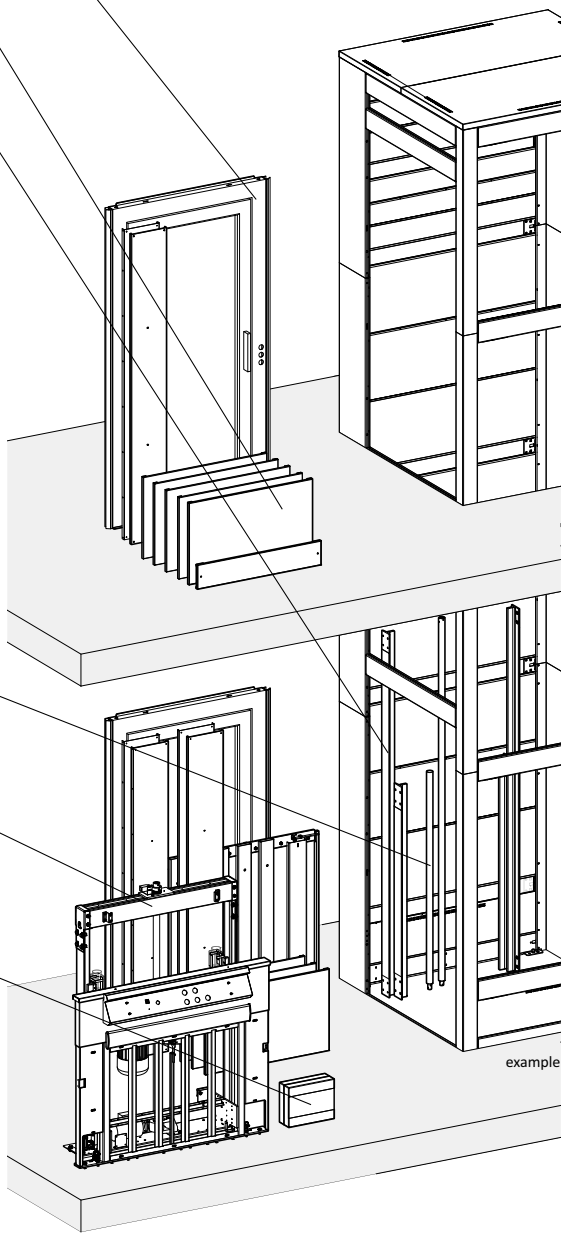
GUIDES
Before placing them inside the shaft, divide them into two groups making up the two columns and place them in the right position. Check the position on the project drawing.



OPERATING SCREWS
Place them inside the shaft and arrange them in the direction in which they are to be installed.

REMAINING MATERIAL
(CAR SLING, CAB, MECHANICAL ACCESSORIES, ELECTRIC ACCESSORIES) Near the low pit stop.

ELECTROMOTIVE FORCE PANEL (FEM)
Next to the shaft or in the appropriate machine room, if provided.



INFORMATION

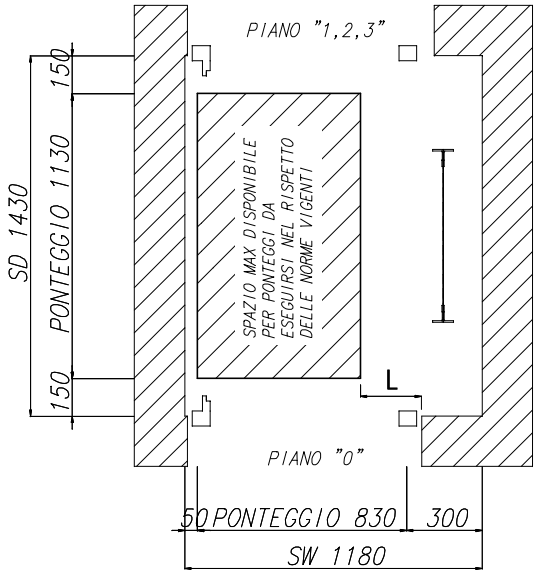
Before proceeding with the installation of the domoFLEX system in a metal framework shaft, **THE STRUCTURE MUST BE ASSEMBLED**. For installation instructions, see the specific manuals packed with the structure**.**

6.2. INSTALLING THE SCAFFOLD

WARNING

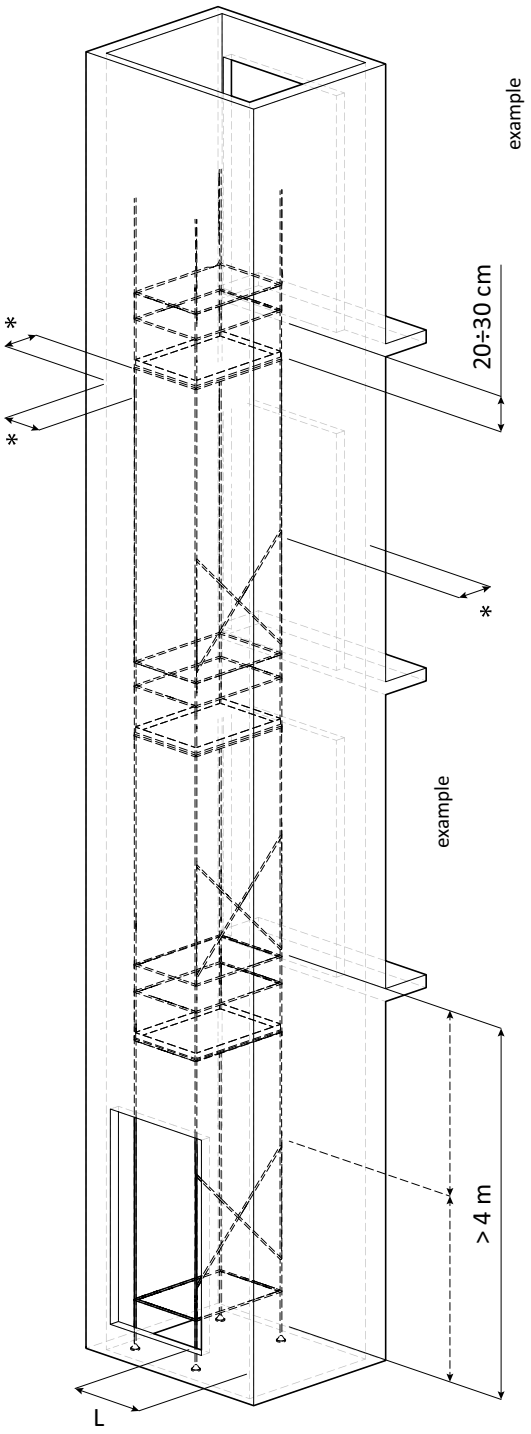
RISK OF FALLING DUE TO A DROP:
In order to minimize the risk of falling, the scaffold must **ALWAYS** be installed by qualified personnel, in compliance with the regulations in force.

Assemble the scaffold INSIDE THE SHAFT where the system is to be installed (even in the case of a shaft in a metal frame). Install the scaffold in such a way that the guides can be moved inside the shaft.



The scaffold must be assembled according to the following characteristics:
- Use anti-slip panels with anti-tip stops;
- Keep the distance from the shaft walls as per the project drawing.
- If the distance between the scaffold and the shaft walls is > 20 cm, install the fall protection parapets;
- It is necessary to provide a support surface 20+30 cm below each stop;
- If the distance between one floor and another is > 4 m, an intermediate support surface must be provided in the scaffold.

NOTE: The images are purely indicative, check the design drawing for correct positioning of the scaffolding.



∗ = indicated on the project drawing
L = machine width

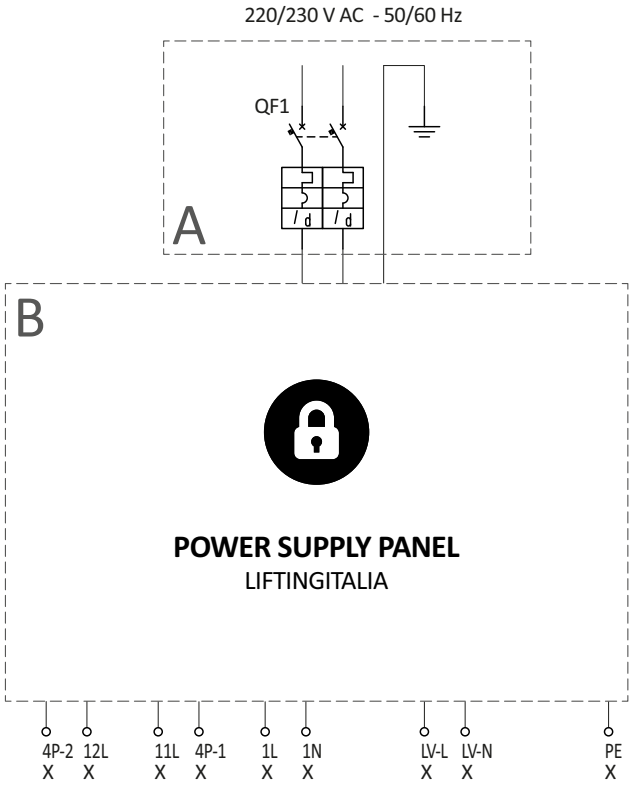
6.3. PREPARING THE ELECTRICAL SYSTEM BEFORE THE PLATFORM

The client must guarantee the protections suitable for the electrical power distribution system and the relative short-circuit current for the Power Supply Panel, according to standard CEI 64-8 et seq. (thermal-magnetic circuit breaker of adequate size and 30mA differential protection [A]).
The Power Supply Panel (also known as "Machinery Room Electrical Panel" or "Electromotive Force Panel"), also from LIFTING ITALIA [B], must be installed adjacent to the shaft or in the machinery room, where applicable.

WARNING

RISK OF CRUSHING:
In order to avoid accidentally starting the system, when there are personnel inside the shaft, the platform "**B**" power panel **MUST** be padlockable.

After installing the power supply panel, record it has been checked in accordance with point 2.1 of the "Final Checks" manual.



Legend:	
A	general electrical panel of the building
B	PADLOCKABLE platform power panel

WARNING

RISK OF ELECTROCUTION:
The lighting and power supply systems must meet the requirements of the system and the regulations in force. Check that it has an effective earth. **If they do not meet all the requirements, interrupt the installation until the system has been brought up to standard** by the customer.

6.4. INTERCOM DEVICE INSTALLATION

The standard scope of supply includes a bi-directional intercom device to allow communication between the car and the machine room.
Taking into account the principal users of these platform lifts (people with limited motor capabilities in private houses), LIFTINGITALIA S.r.l. recommend a permanent phone connection be established (phone assistance). Should there not be a ground phone line, a GSM system must be provided.

6.5. GENERAL CHECKS

a. GENERAL CHECKS OF THE WORK AREA

- Provide a material storage area close to the work area, easily accessible and not exposed to the elements;
- Prepare any lifting equipment to be used;
- Check there are all materials using the list;
- Check the condition of all materials upon receipt at the construction site and in case of damage or failure contact the supplier immediately;
- Periodically check materials destined for long storage before installation to avoid possible deterioration caused by incorrect storage;
- Check the completeness of the attached documentation.

b. GENERAL CHECKS ON THE SHAFT

The shaft structure shall comply with national building regulations and shall be capable of withstanding at least the forces that can be caused by the lifting platform, the guides during the intervention of the safety devices, loading and unloading, etc.
The shaft must have the following features:

- Smooth, plastered walls and continuous up to the pit;
- Maximum out of plumb over the entire height of the shaft (“net plumb shaft”), unless otherwise specified in the project drawing:
  for structures installed inside the shaft: + 2,5 cm on each side;
  for systems installed in masonry shaft: + 2,5 cm on the mechanical equipment side
  + 0,5 cm on the other 3 sides
- Concrete pit bottom having the resistance to withstand the loads indicated in the project drawing;
- Waterproofed pit bottom against water infiltration or, in the case of open-air systems, provide drainage or water collection channels;
- Presence of passages and ducts for power lines and, if required, that there are openings for the discharge of fumes;
- Provide a through-hole for the pit protection device drive cable as shown on the project drawing;
- It must not be used for any other purpose: for this reason it must not contain cables or devices that are not part of the service of the lifting platform;
- Check that the entrances to the work areas are properly closed;
- Check that all holes and housings for electrical cables are free, inspectable, well-finished and dry;
- Check that there is adequate ventilation for the smoke outlet;
- Determine the level of the finished flooring of each floor.

c. CHECKING THE VERTICAL MEASUREMENTS OF THE SHAFT

Check that the measurements of

- Stroke
- Header
- Pit
- Landing door openings
- Plumb

correspond to the same dimensions as those shown on the project drawing of the shaft section.

d. CHECKING THE DRAWING MEASUREMENTS OF THE SHAFT

Check that the measurements of

- Width
- Depth
- Squaring
- Landing door position

correspond to the same measurements as shown on the project drawing of the shaft plan.

e. THE MACHINERY ROOM MUST HAVE THE FOLLOWING CHARACTERISTICS

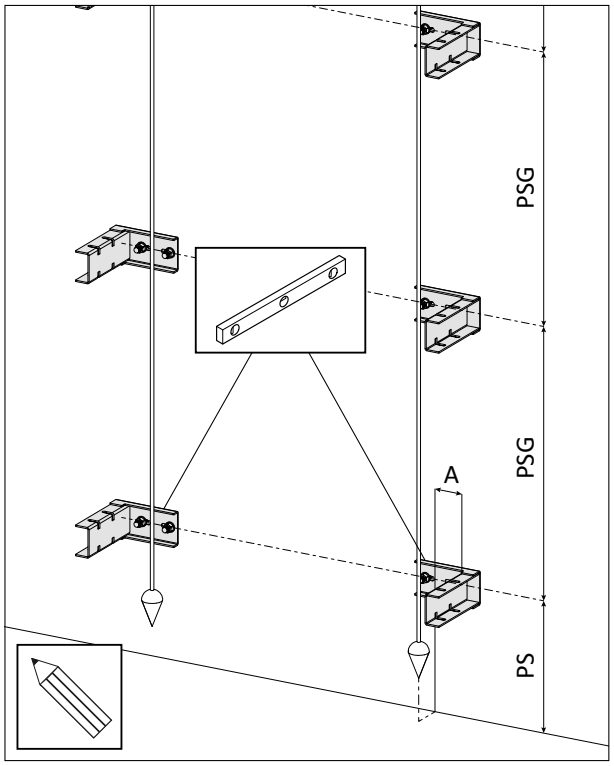
Il The machinery room must have the following characteristics:

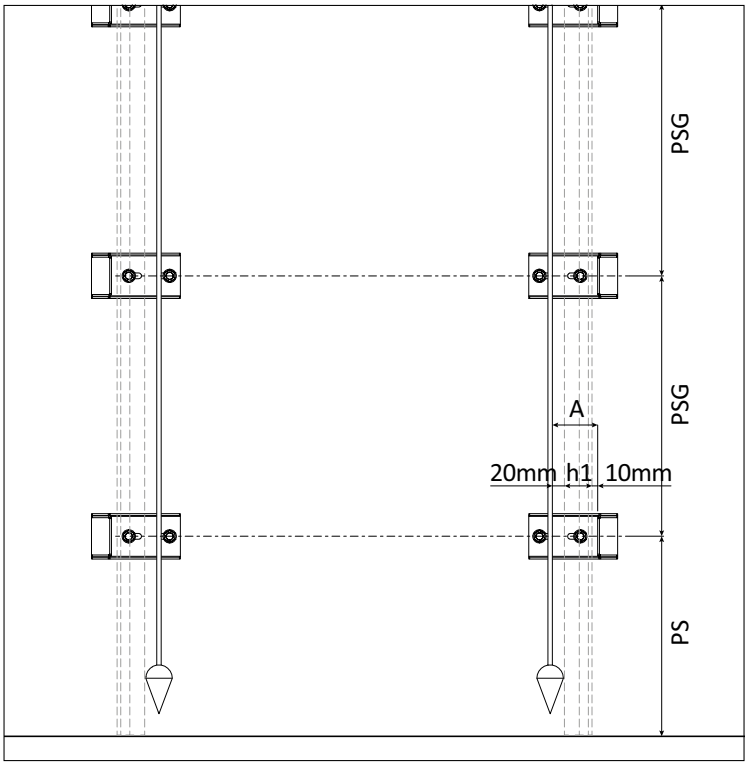
- Protected against the weather and humidity;
- Temperature between +5 and +40°C;
- The area in front of the entrance door is clear and accessible according to the indications of the project drawing;
- Presence of passages and ducts for power lines and, if required, that there are openings for the discharge of fumes;
- Provide a hole for the cable for the pit protection device (in the case of a masonry compartment) and for the cable for connection to the electrical panel, as indicated on the project drawing;
- Sufficient height and properly illuminated;
- It must not be used for any other purpose; for this reason it may not contain cables or devices that are not part of the service of the lifting platform. Apply this point to the inside of the cabinet if there is a cabinet that acts as a machine room;

7. MECHANICAL EQUIPMENT - INSTALLATION

7.1. GUIDE RAIL FIXING BRACKETS ASSEMBLY

- Check the position of the guide rail fixing brackets, using the project drawing.

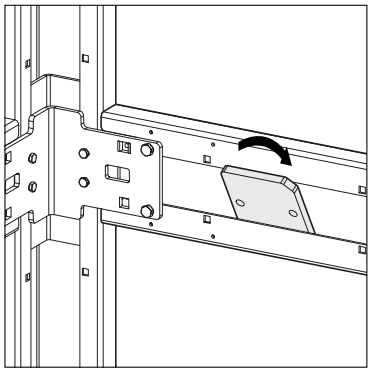


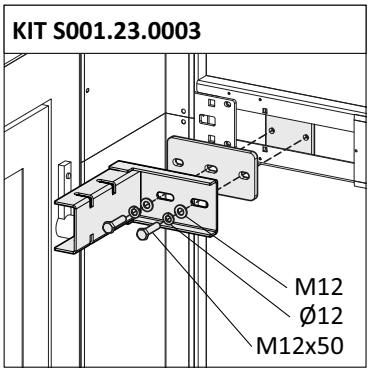


7.2. GUIDE RAIL FIXING BRACKETS MOUNTING with shaft made of an IRON STRUCTURE

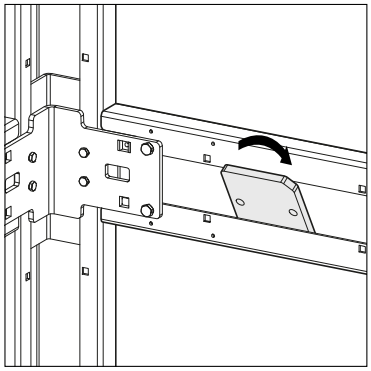
- Check the position of the guide rail fixing brackets on the project drawings, the proceed with assembly.

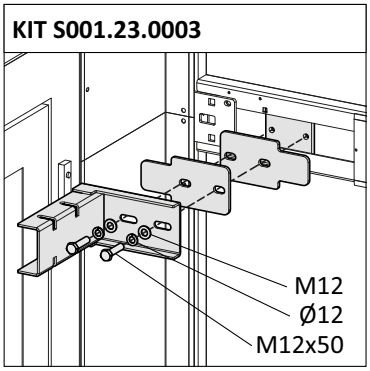
CASE 1 - INSTALLATION AWAY FROM CORNER





CASE 2 - INSTALLATION NEAR CORNER





INFORMATION

in case of metal structure, the machine side cladding must be mounted before starting to assemble the guide rails.

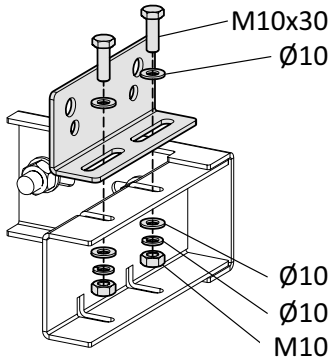
7.3. COUNTERBRACKET MOUNTING

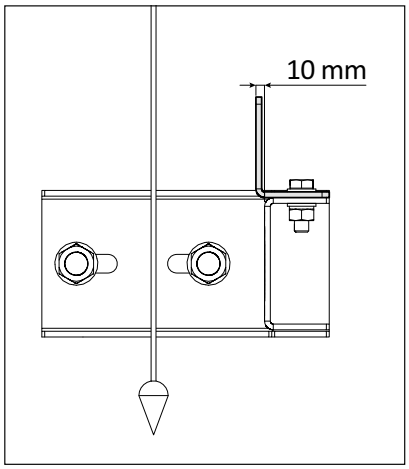
INFORMATION

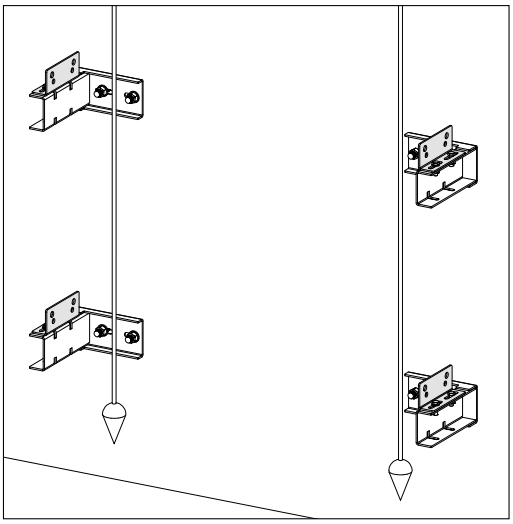
In the case of fixing with chemical anchors, use the screws of **KIT F350.23.0016**.

Do not fully tighten the screws as it will be necessary to adjust the brackets after mounting the guides.

KIT F350.23.0010V03





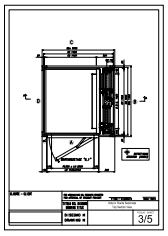


7.4. MECHANIC PREPARATION

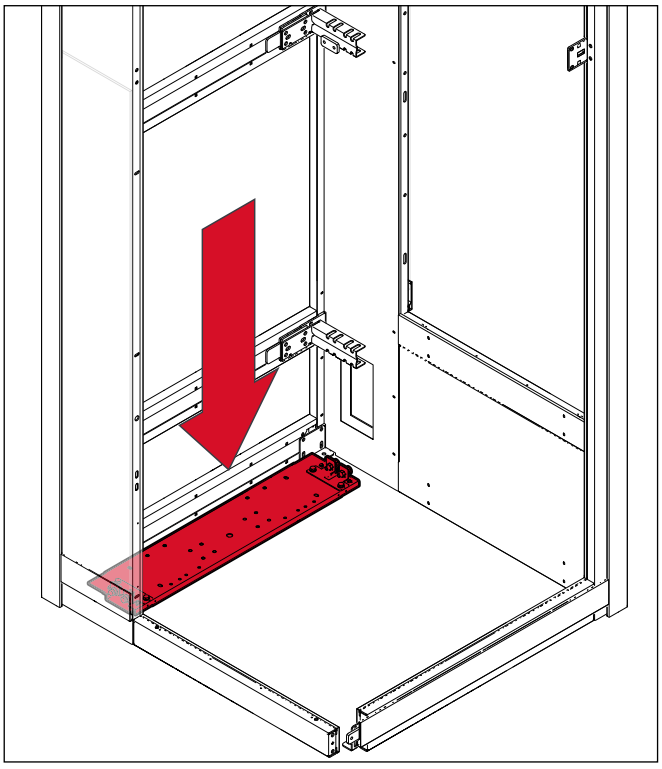
STARTING TEMPLATE - POSITIONING

INFORMATION

Check the positioning of the starting template from the project drawing.



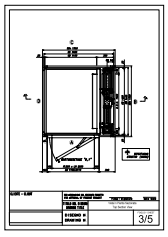
- Position the template between the fixing brackets of the guides previously installed, as indicated in the project drawing.



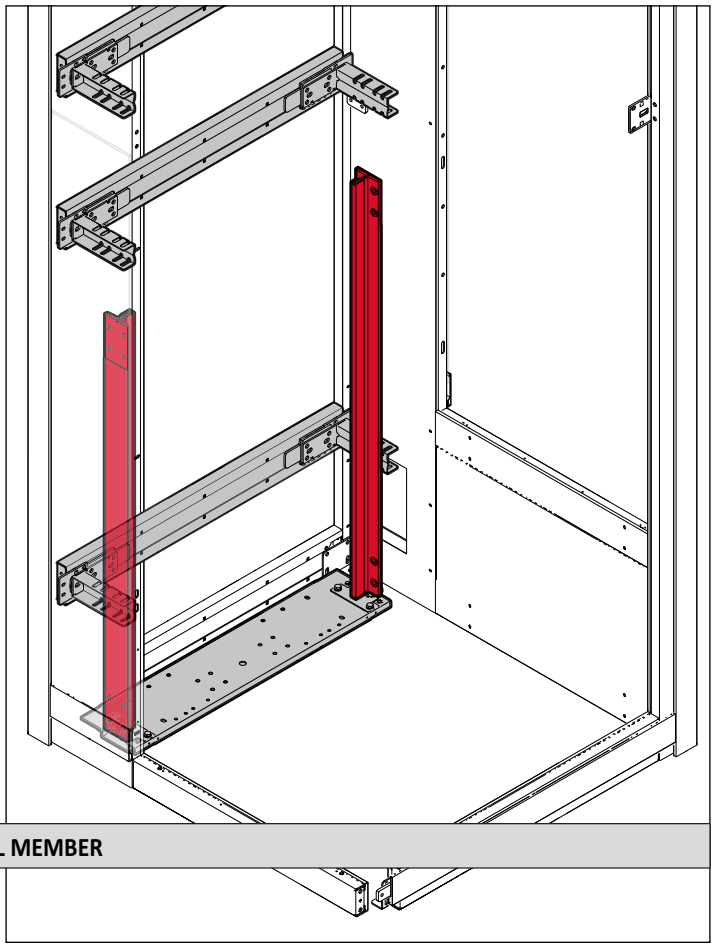
MECHANICAL ASSEMBLY* - POSITIONING

INFORMATION

Check the position of the starting block on the project drawing.



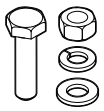
- Position the mechanical assembly between the guide rail brackets previously installed.



MECHANICAL ASSEMBLY* - REMOVING UPPER HORIZONTAL MEMBER

- To remove the upper horizontal member unscrew the "upper threaded nut" and temporarily remove the bearing and support bushing.

INFORMATION



Reserve nuts and bolts as they will be needed when fitting the panel back.

- Temporarily place the top crossbar on the top landing or anyway outside of the shaft.

⚠ CAUTION

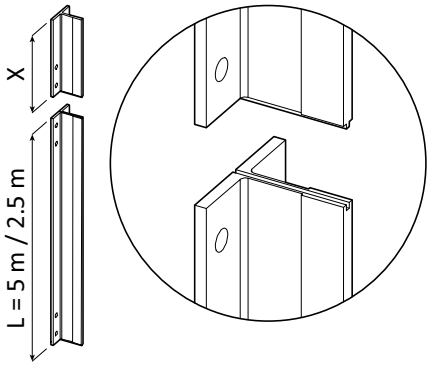
DANGER OF CRUSHING:
Handle the croshead carefully, using a suitable lifting device and always wearing shoes and safety garments.

* See CAP. 2 " PRODUCT DESCRIPTION"

7.5. FITTING THE GUIDE RAILS

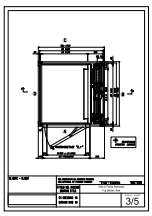
INFORMATION

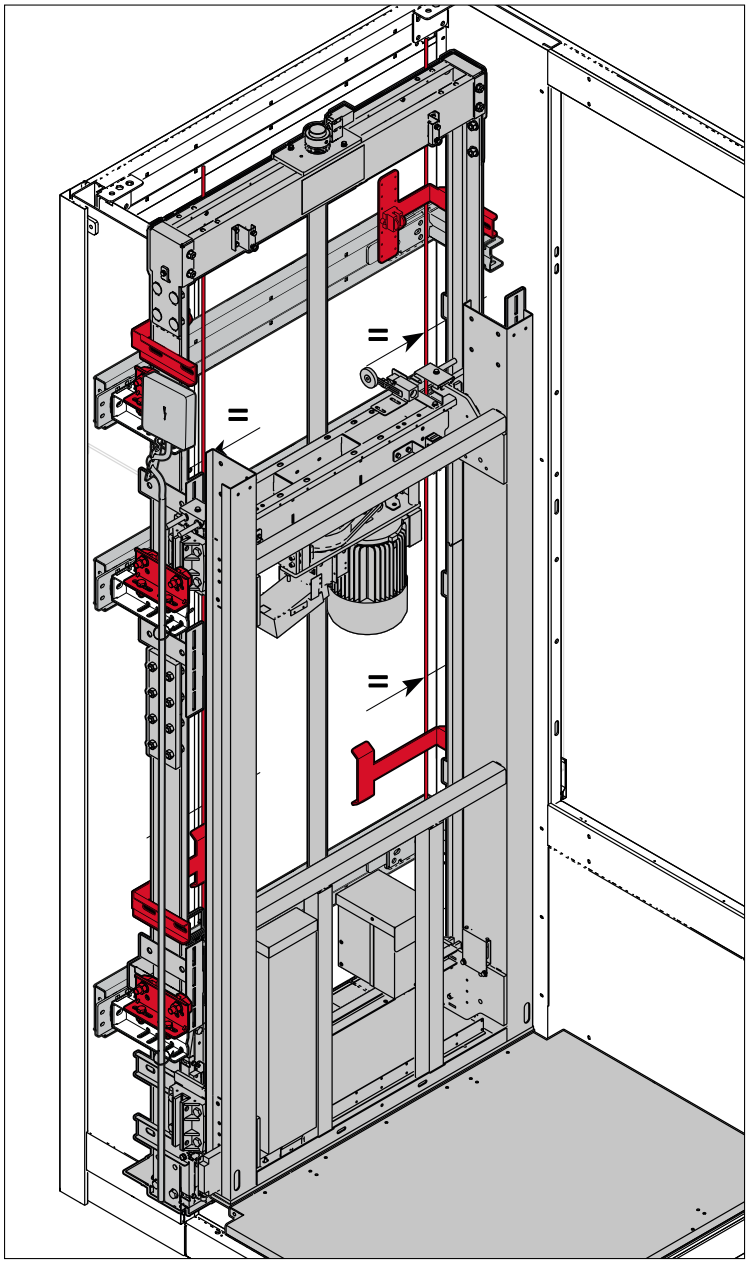
Example: if the short piece with a tap joint is to be positioned above, all the guide rails must be positioned with the tap joint down.



INFORMATION

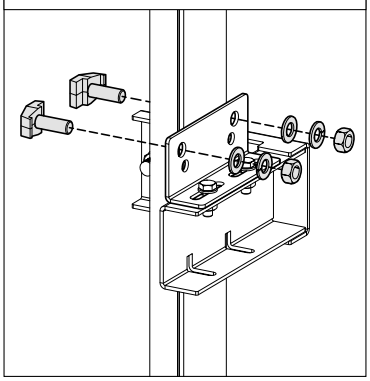
Guide rails (whole or pieces) assembly sequence must follow the **project drawing**.

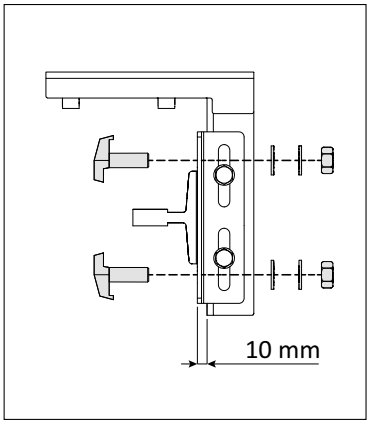




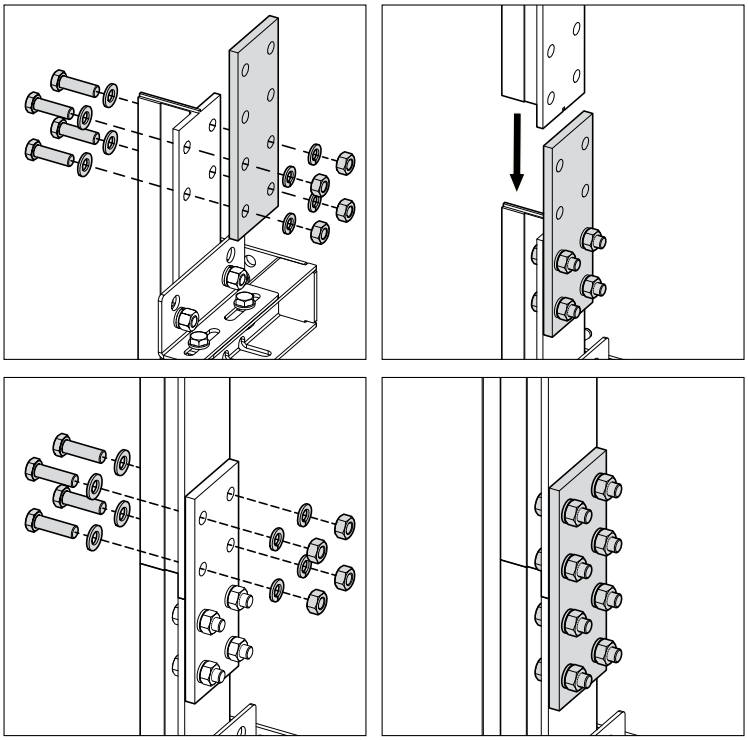
- Fix the guide rails onto the counter brackets previously installed.

KIT V0301.04.0001V03





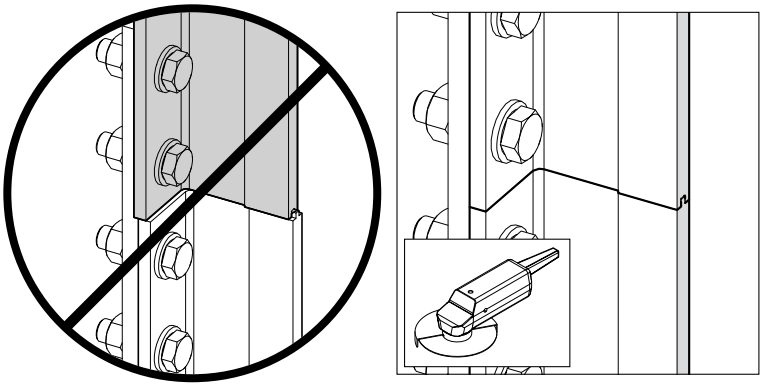
- Joint the guide rails using the plates and nuts and bolts supplied with the lift.



INFORMATION

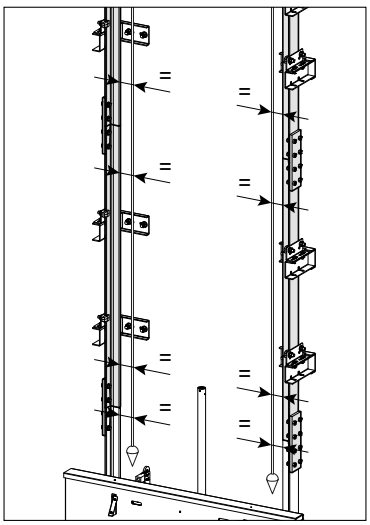
Check that the sliding surfaces of the guides are perfectly coplanar and aligned and do not have any bumps or burrs.

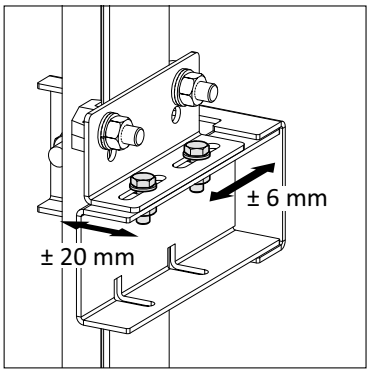
In case of imperfections that cannot be corrected by repositioning, smooth the surfaces until they are perfectly coplanar.



INFORMATION

Check the guide rails alignment using the plumb.



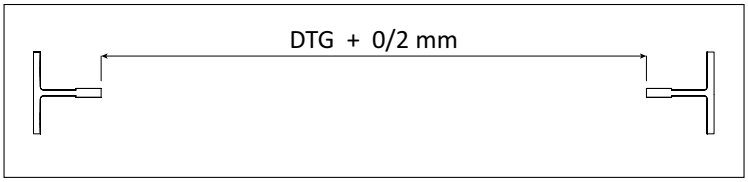


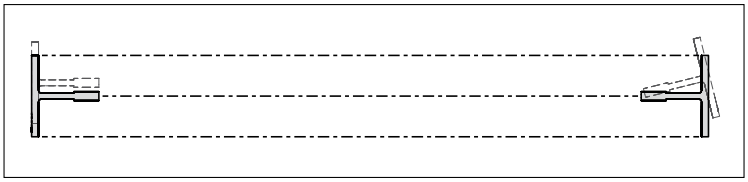
7.6. GUIDE RAILS ALIGNMENT CHECK

INFORMATION

Check if the distance between the guide rails (DTG) matches the value stated in the project drawing.

Check the collinearity and parallelism between the guide rails.

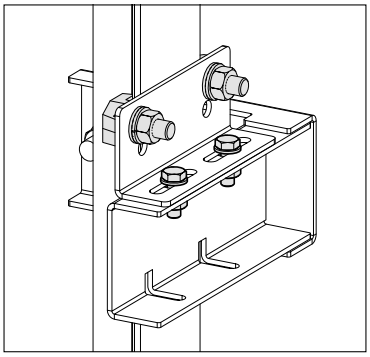


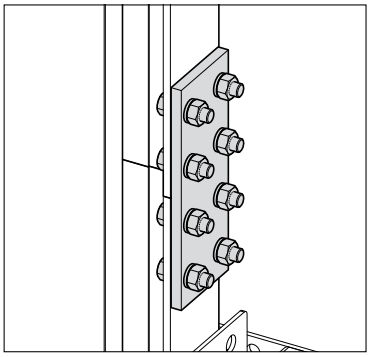


- Proceed with the assembly up to the last upper guide rail pieces.

7.7. FASTEN THE SCREWS

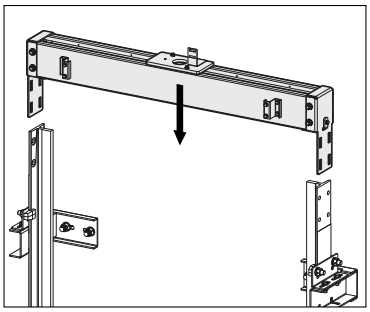
- Fasten the screws to end.

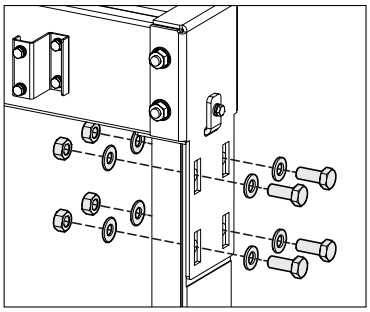




7.8. FITTING THE OPERATING SCREWS

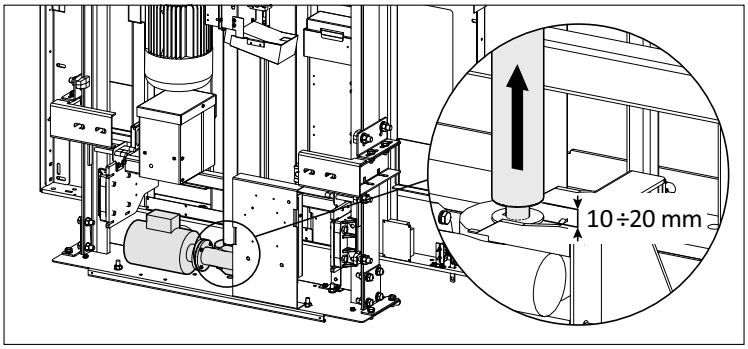
- Install the horizontal member removed from the guide rail starting block in the headroom.



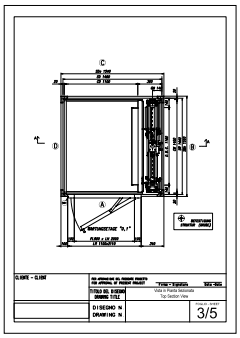


INFORMATION

<u>Check that the first screw section</u> (pre-assembled on the starting block) **<u>is raised from the base by at least 10 mm</u>**.
This detail reduces the need for subsequent header adjustments.

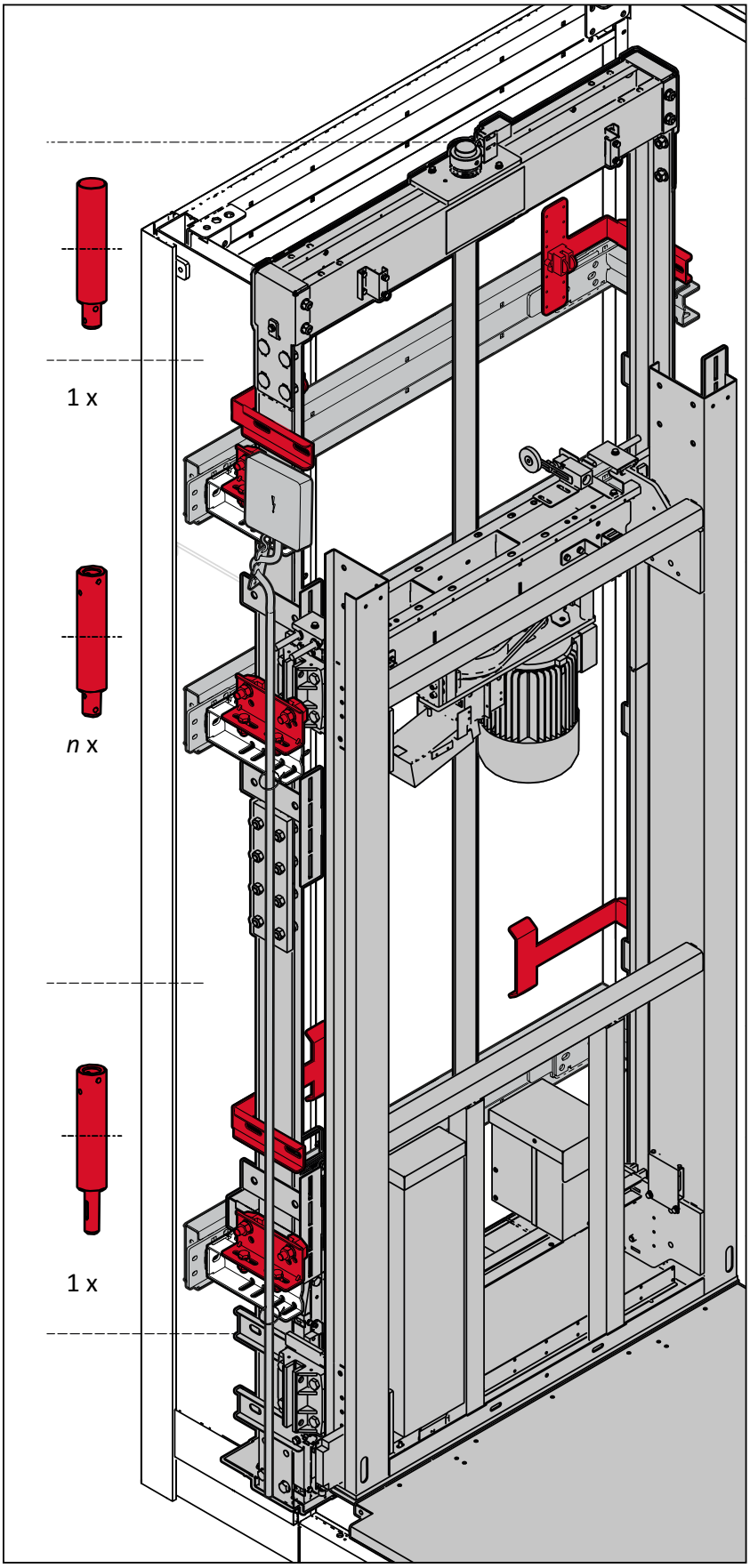


INFORMATION



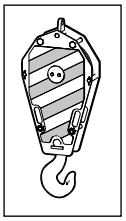
Fitting the operating screws must be done from the bottom upwards.

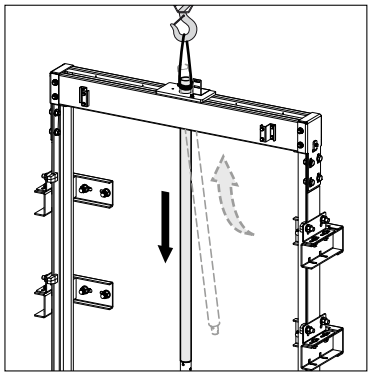
CHECK:
on the project drawing, the length of the individual parts and the correct assembly sequence.



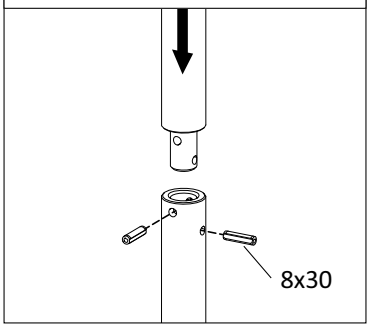
⚠ CAUTION

DANGER OF CRUSHING:
Lift the screws using suitable lifting gear and always wear safety shoes and clothing.

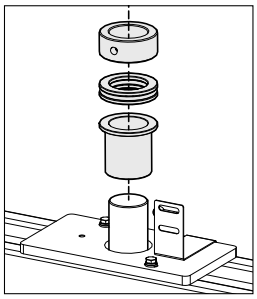




KIT F352.23.0003 (0013)



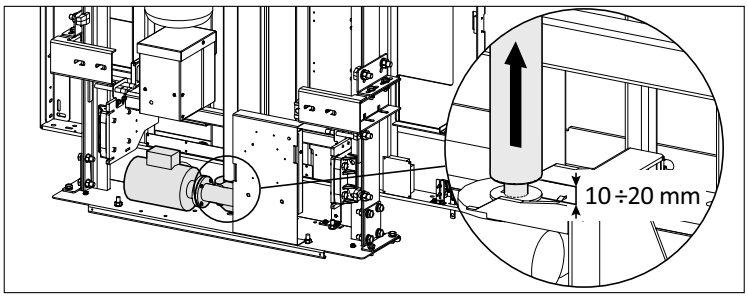
- Insert the intermediate screws with the “easy” coupling (male-female mounting) and fix the two pieces with the supplied pins.



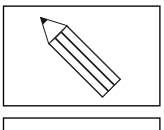
- Insert previously disassembled bushing and bearing in the head and screw the nut back on.

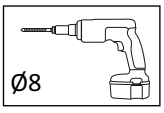
INFORMATION

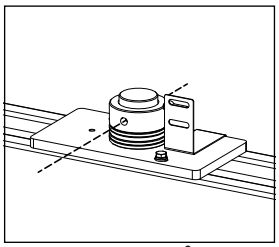
CHECK:
If you have finished installing the screws, the one in the head is below the height of the upper nut, use the emergency motor to lift the screws unit paying attention to the right direction of rotation.
The distance between the motor and the screw must be a maximum of 20 mm.



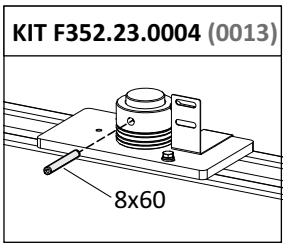
- Drill a hole in the screw to match the hole provided for inserting the plug. Insert the plug.

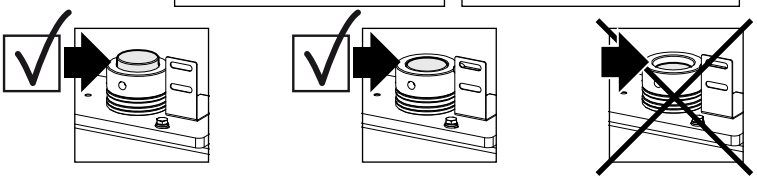






KIT F352.23.0004 (0013)





8. ELECTRICAL AND ELECTRONIC DEVICES

8.1. ELECTROMOTIVE FORCE PANEL FEM

For electrical connections, please refer to the wiring diagram and to the assembly instructions provided with the materials.
The first connections to be made in the controller are.
I primi collegamenti da effettuare nel quadro di manovra sono:

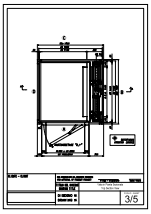
1. with the grounding conductor;
2. with the power supply board in the machine room;
3. with the electric motor.

WALL INSTALLATION

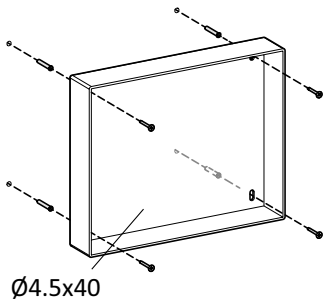
- Check the drawing to see on which floor and side the controller is to be installed.
- Rest the control panel where it is to be fixed;
- Open the panel and drill at the marked eyelets;
- Feed the power cables into the panel.
- Drill the holes and fix the cabinet where required.

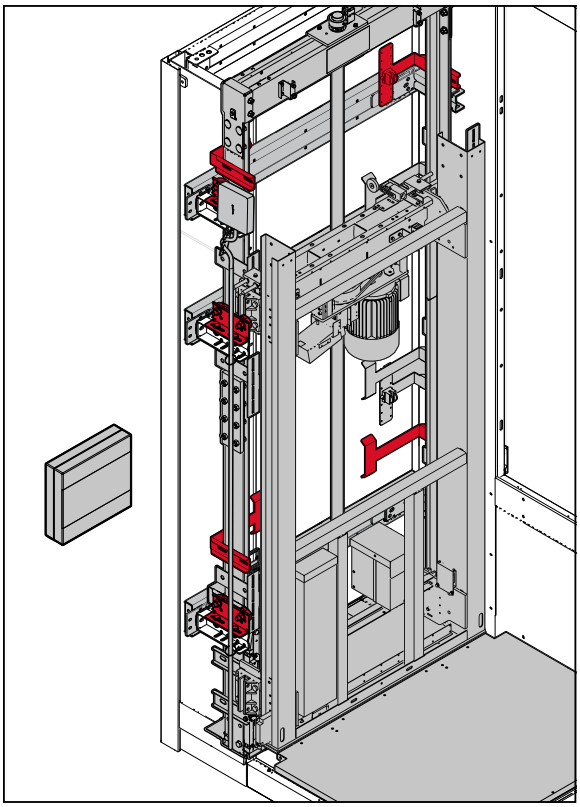
INFORMATION

For installation always refer to the **project design**.



KIT F352.23.0007





8.2. CONNECTIONS FOR A FIRST START-UP

- The board is delivered with electrical bridges on terminals XQ1, XQ14 and XQ17 for the first movement in maintenance mode by means of buttons 0 and 1, on the platform's push-button panel.
- Connect a temporary cable for the single-phase 230 Vac power supply to the terminals L, N, PE on the panel on board the machine.
- Make all earth connections.

NOTE:
To activate the movement of the machine, press button 1 for an ascent and button 0 for a descent.

⚠ CAUTION

DANGER OF CRUSHING:
in maintenance mode, the ascent control has no electrical or mechanical limit, so the **machine only stops when the button is released, or when the STOP button on the platform's push-button panel is pressed**.
In descent the stroke is limited by the PO stop magnets that are positioned during testing

8.3. STARTING THE SYSTEM

To start the system:
- Switch on the control panel;
- Remove any wooden blocks previously placed under the base of the car sling;

AVVISO

RISK OF INSTALLATION DAMAGE:
Before moving the platform using the panel, it is necessary to **clean the guides and the screw thoroughly and oil them completely** with suitable oil (e.g. iso vg-220 ep or higher).

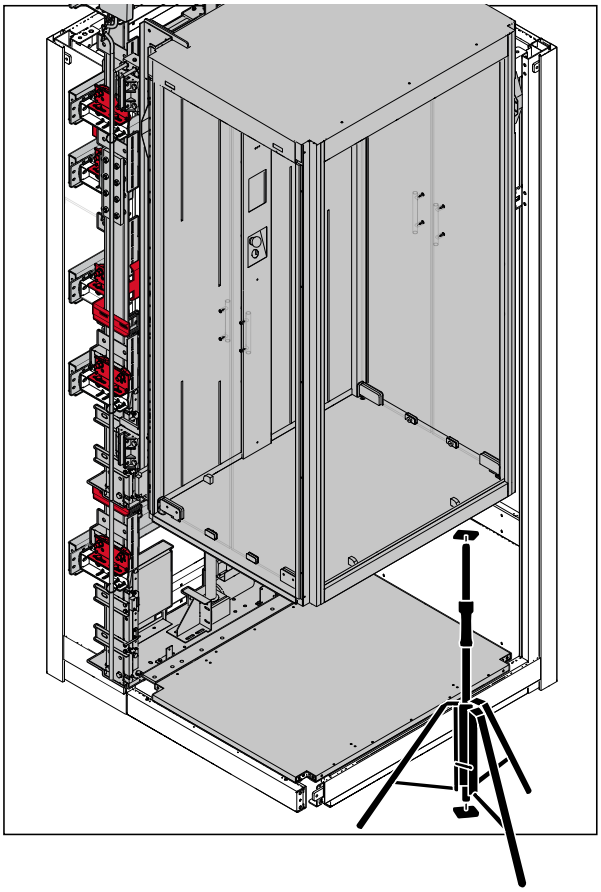
- It is also recommended to do the following:
- Visually check that there are no obstructions or protruding materials along the shaft that could interfere with the car sling and the base;
- Check that all STOPs are off;
- Check that the distance between the cab and the head is the same as that shown in the project;
- Supply voltage to the switchboard by controlling it in MAINTENANCE mode;
- Check for abnormal noises.

9. SAFETY DEVICES - PIT PROTECTION DEVICE

9.1. INSTALLATION OF PIT PROTECTION DEVICE

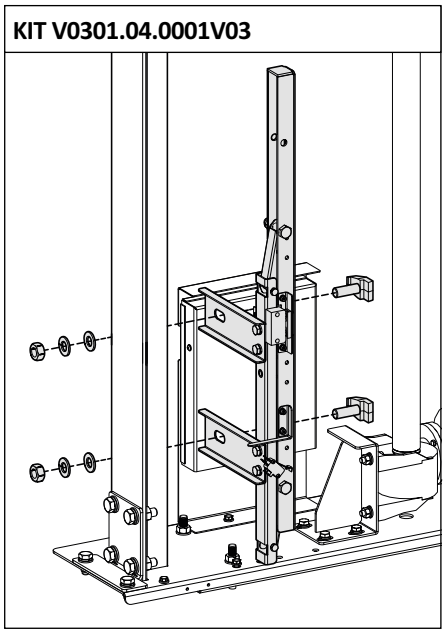
CAUTION

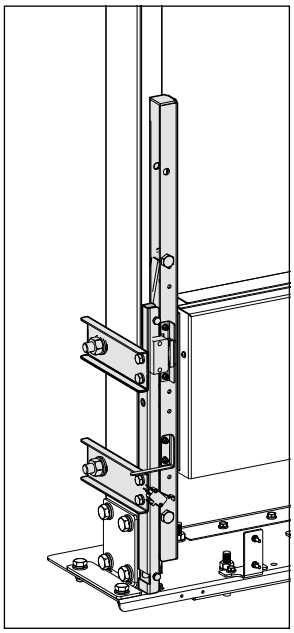
DANGER OF CRUSHING:
Place a temporary mechanical block that stops the machine from descending (e.g. a certified prop) so that the platform lifts safely.



- Position the pit protection device as shown on the project drawing and secure it to the guides with the clamps.

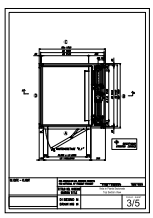
KIT V0301.04.0001V03





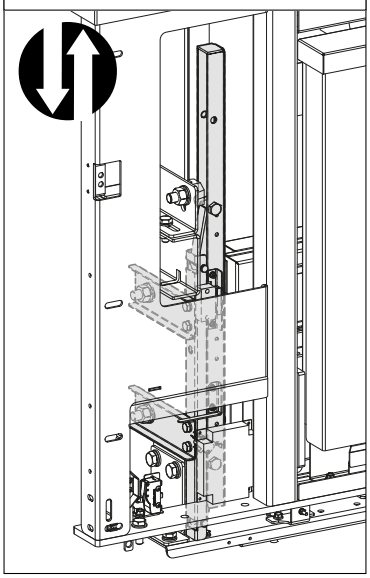
INFORMATION

For installation always refer to the **project design**.

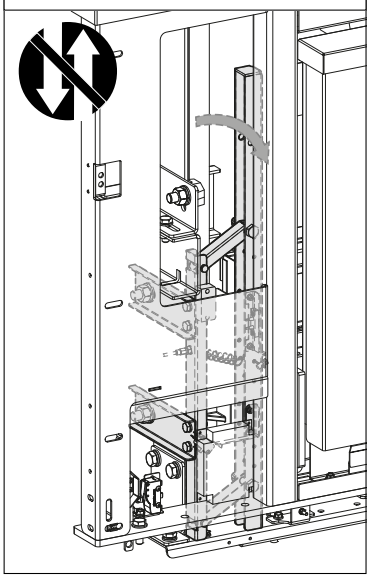


- Test the correct movement of the device and the functionality of the micro-contacts.

CLOSED DEVICE

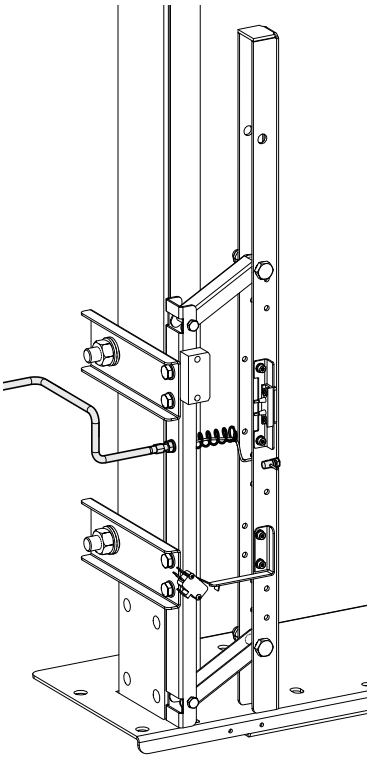


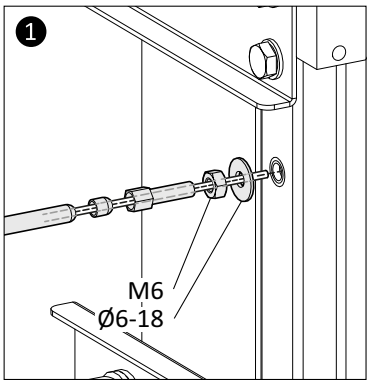
OPEN DEVICE

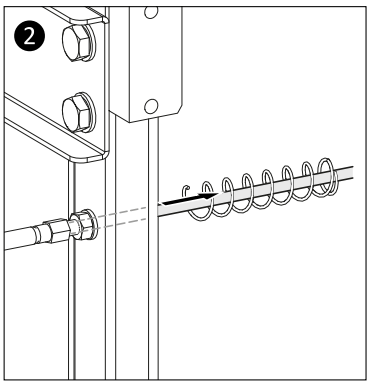


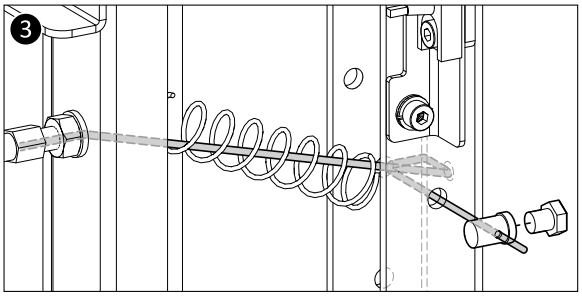
- Install the lever operated mechanism:
  1. insert the cable into the sheath;
  2. stop one end of the sheath at the pit protection device;
  3. pass the cable through the spring and secure the end of the cable with the clamp provided.

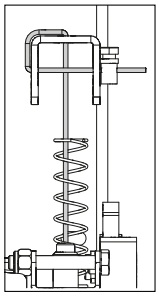
KIT F352.23.0011











INFORMATION

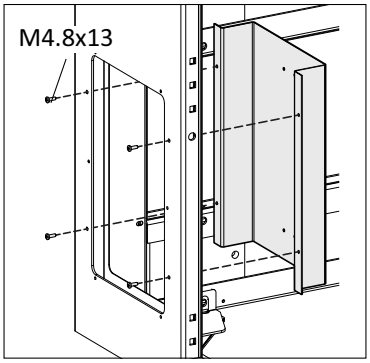
Temporarily secure the other end of the cable and sheath so that they do not interfere with the installation of the system.

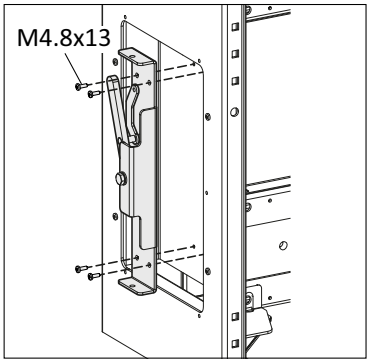
9.2. INSTALLING THE PIT PROTECTION DEVICE OPERATING LEVER

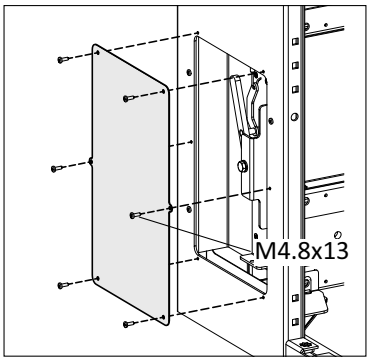
STRUCTURED SHAFT

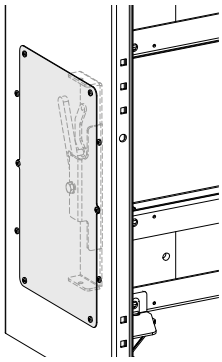
- Install the lever support (supplied with the structure).
- Install the lever.
- Once you have set up the opening mechanism, close the compartment.

KIT S000.23.0007



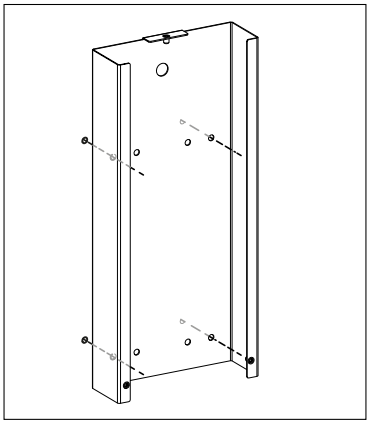




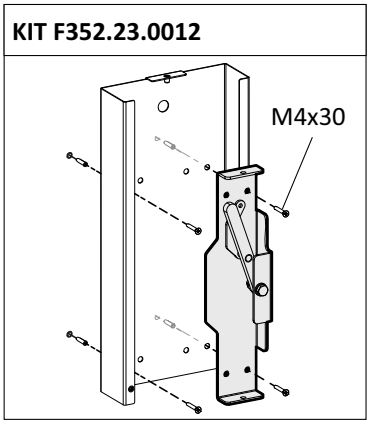


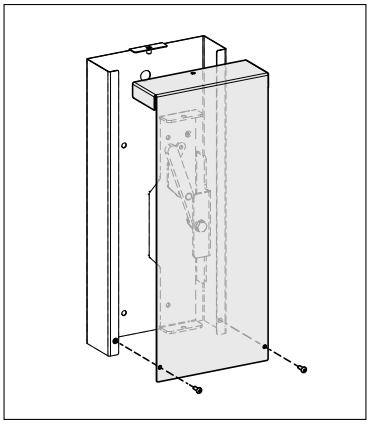
MASONRY SHAFT

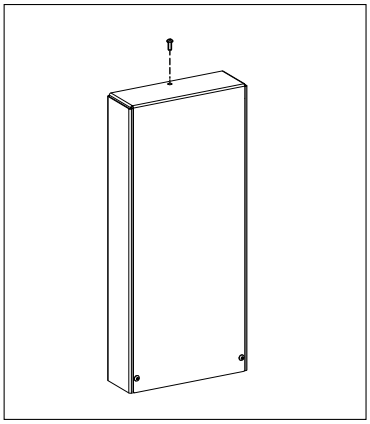
- Position the lever as shown on the project drawing.
- Mark the references and drill holes into the masonry.
- Install the cabinet and lever.

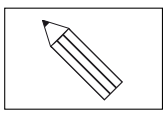


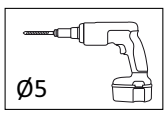
KIT F352.23.0012





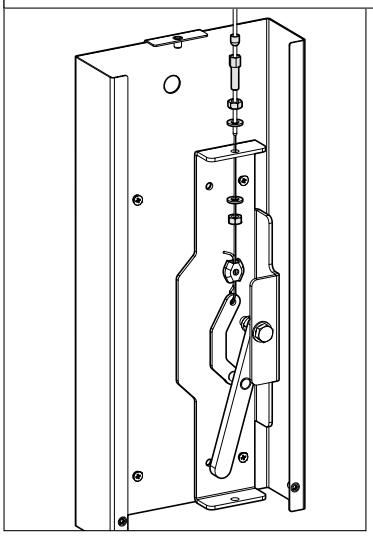


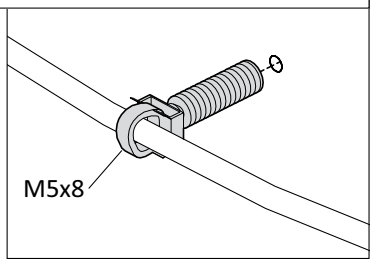




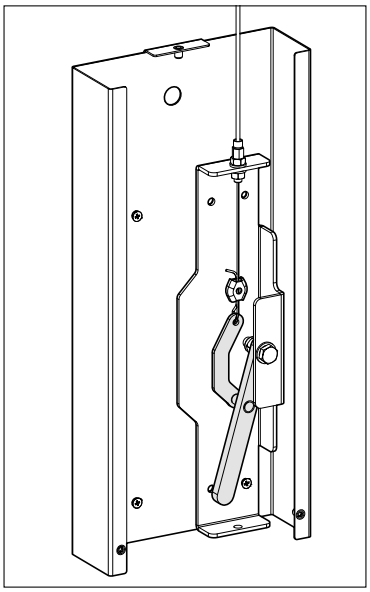
- Secure the cable inside the sheathing so that when the lever is raised, the pit protection device is activated.
- Stop the sheath along its path with the clamps provided.

KIT F352.23.0011

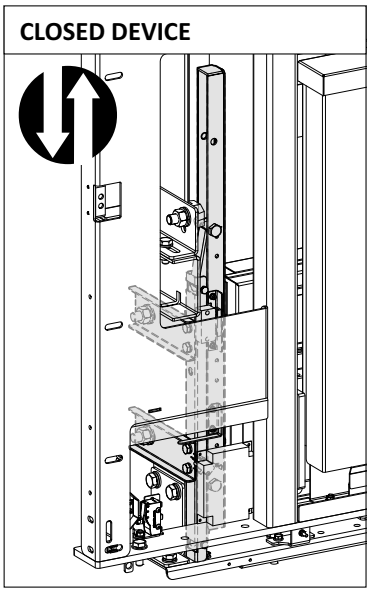


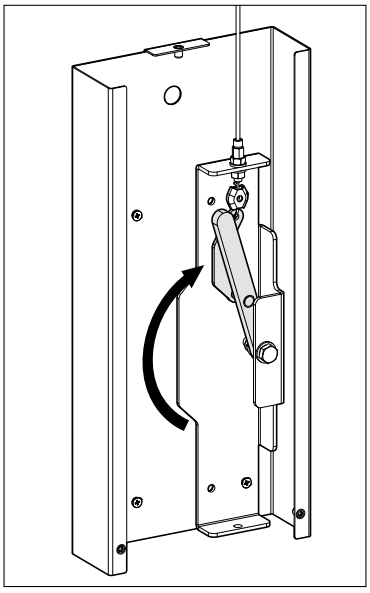


- Check that the operating lever of the pit protection device is working properly.

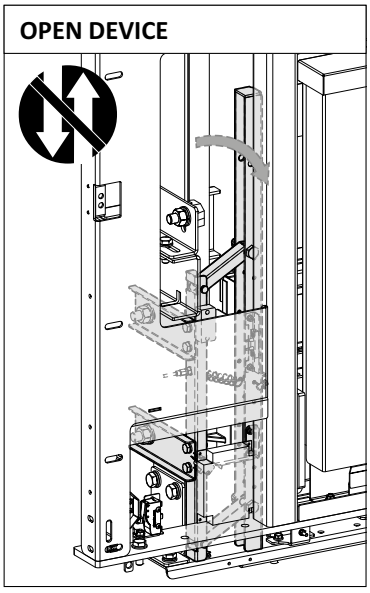


CLOSED DEVICE





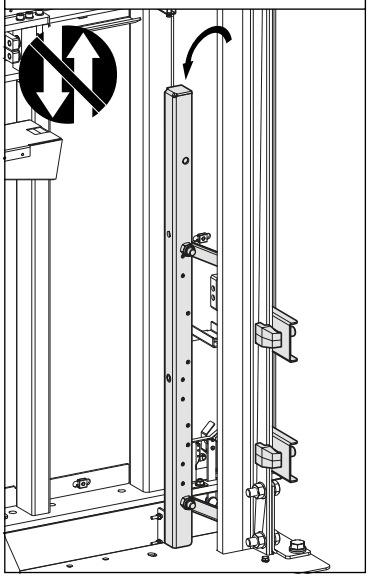
OPEN DEVICE



10. LOAD SUPPORT ASSEMBLY

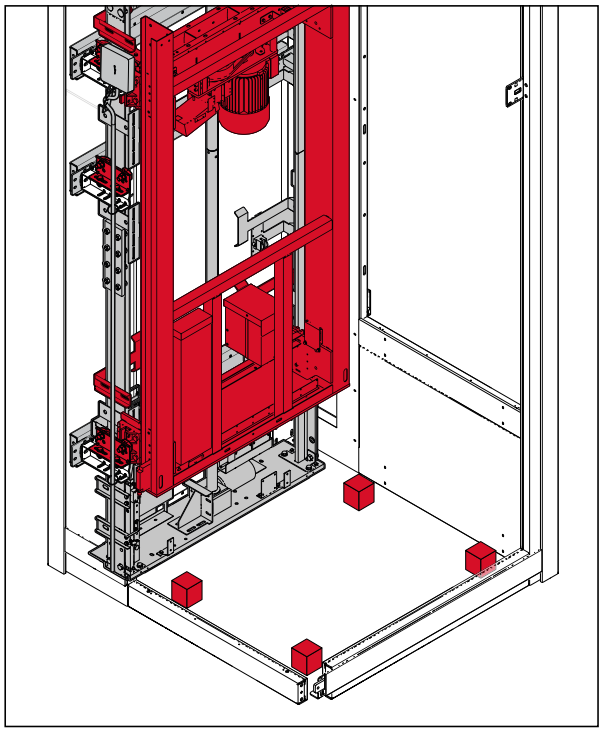
	**⚠ CAUTION** **DANGER OF CRUSHING:** The following is an examination of the installations for which it is necessary to move the load support. **Always activate the pit protection device (SAFE-PIT) when working in a pit.**

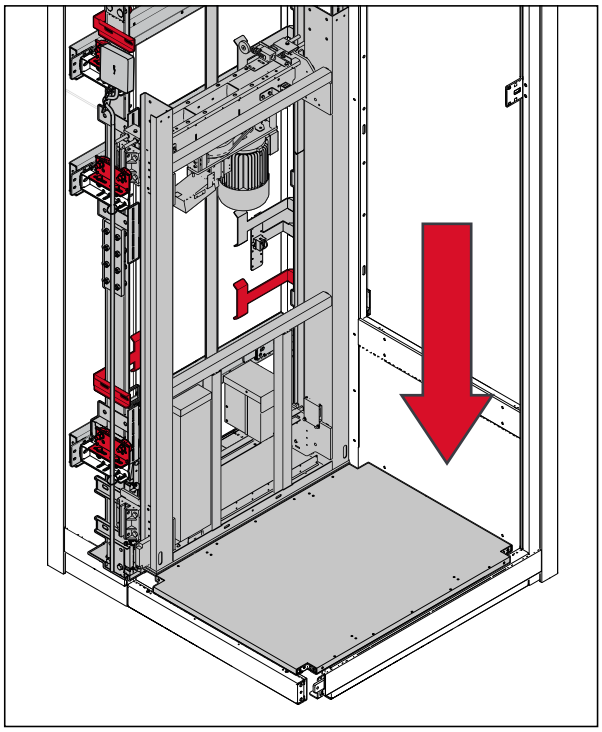
OPEN DEVICE



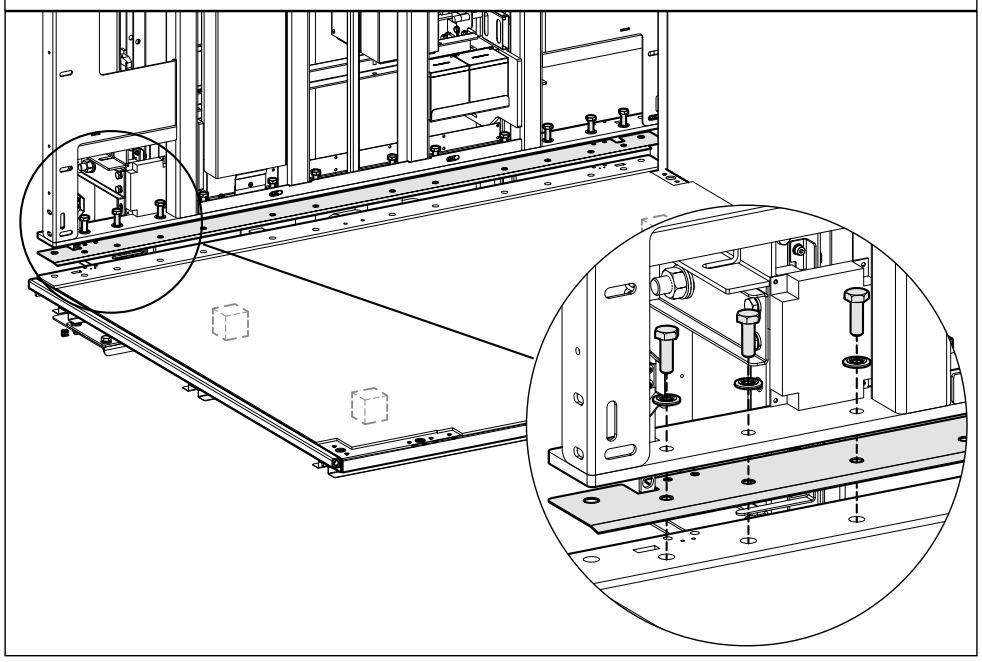
10.1. FITTING THE PLATFORM (CARRIER*)

- Lift the platform wall;
- position some shims (like wooden blocks) under the platform basement to level it and be able to install it;
- install the pit protection device (safe-pit);
- place the platform basement;
- place the steel sill between the platform wall and the platform basement;
- insert and tighten the fixing screws.



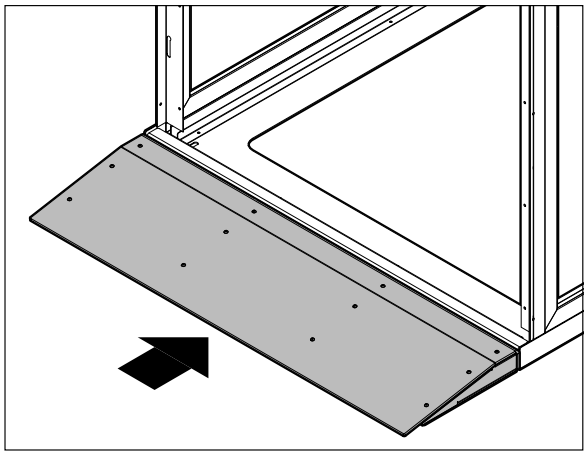


KIT F352.23.0002



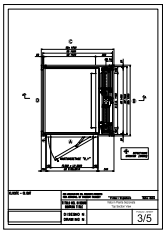
* A “carrier” means a part of the lift by which persons and/or goods are supported in order to be lifted or lowered.

10.2. FIXED ENTRY RAMP ASSEMBLY (if applicable)

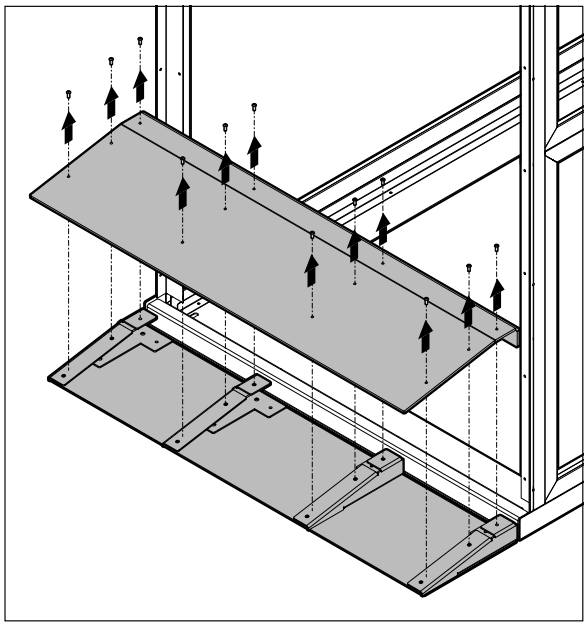


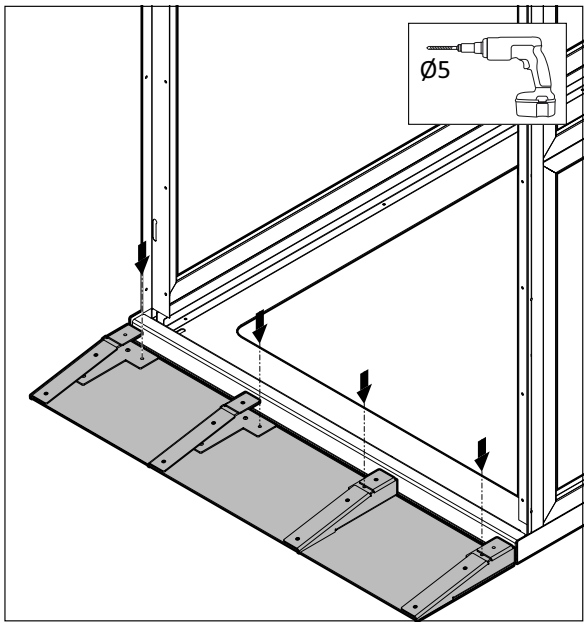
INFORMATION

Position the ramp as shown on the project drawing;

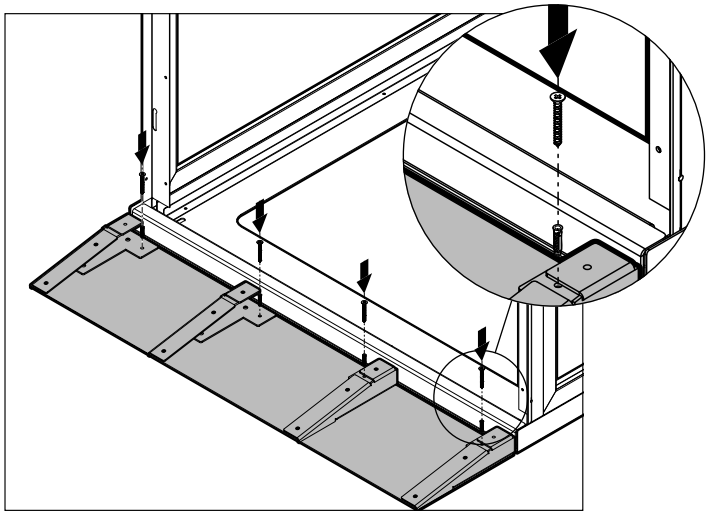


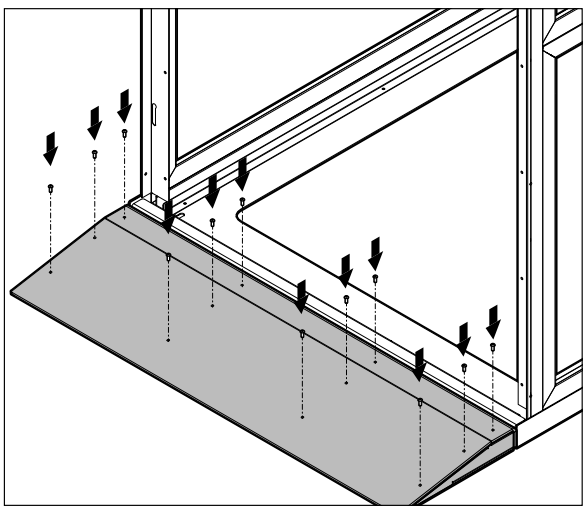
- Remove the protective plate;
- Drill directly using the base as a template;





- Fix the base with the dowels;
- Replace and secure the protective plate with the screws provided.



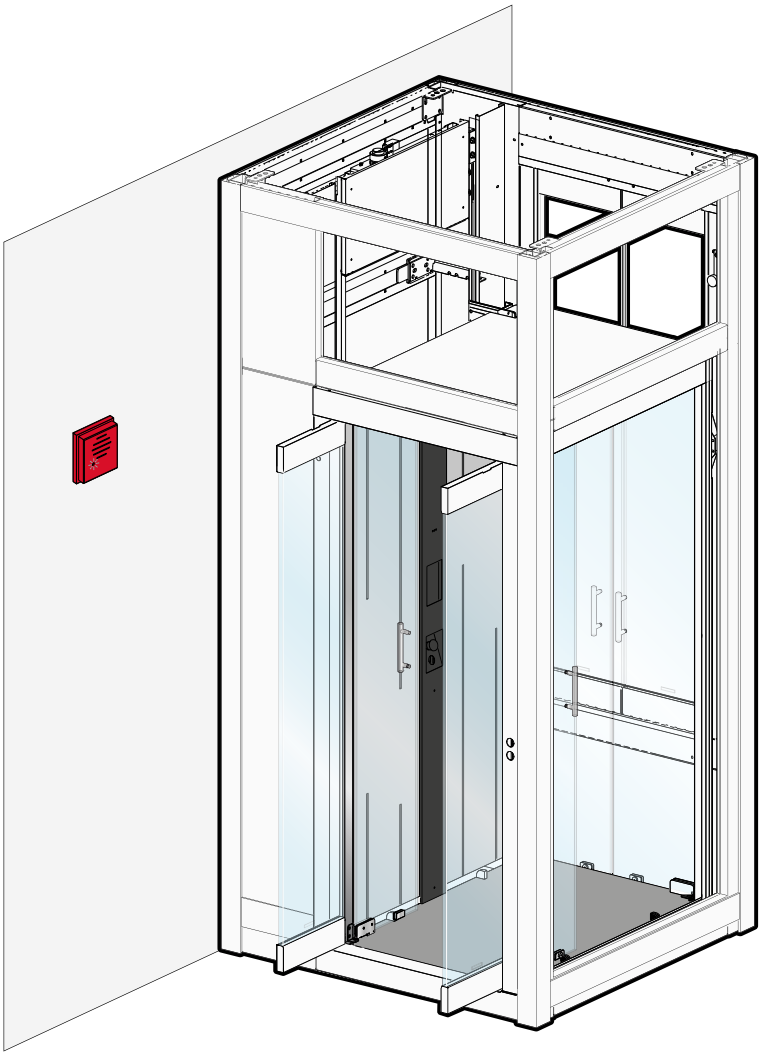


11. ELECTRICAL CONTROL DEVICES

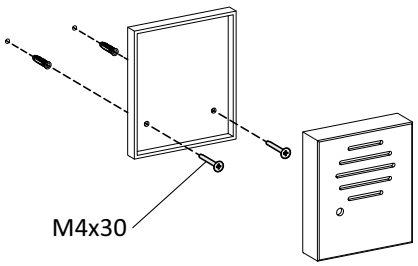
The manual explains how to install (mechanically) the electronic control devices, for electrical connections refer to the electrical schemes of single components, to be found in the related packages.

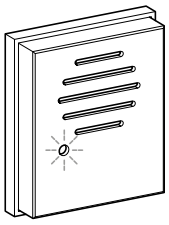
11.1. ALARM SIREN

- Fix the alarm siren in a position where it can be heard as loud as possible and so that the light indicator is clearly visible.

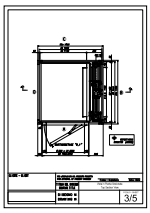


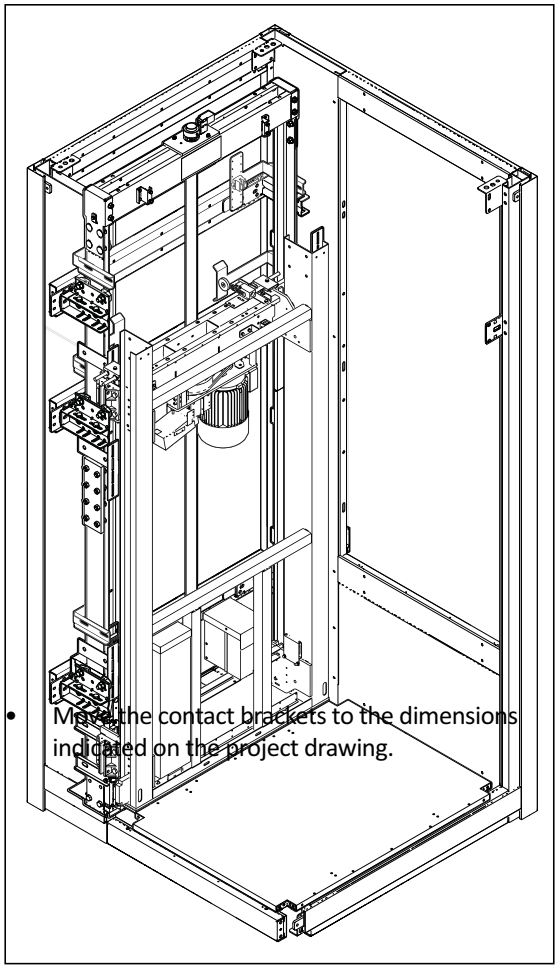
KIT F352.23.0012



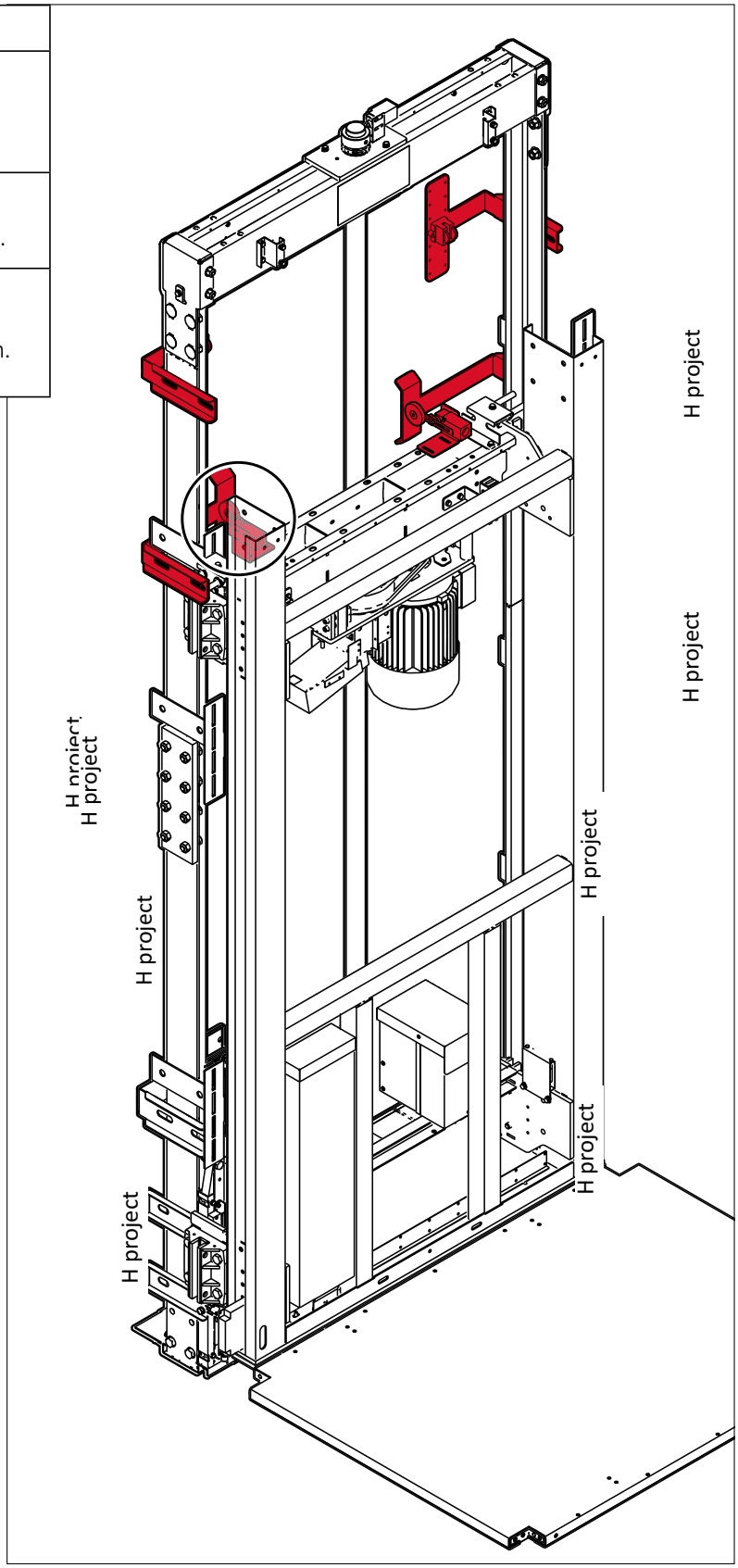


11.2. PRE-ASSEMBLED CONTACTS

INFORMATION	
	Always refer to the **project drawing** for installation.
	NOTE: The contacts are pre-mounted on the guide start unit.
	NOTE: The final adjustment will be made during the first test run.



- Move the contact brackets to the dimensions indicated on the project drawing.

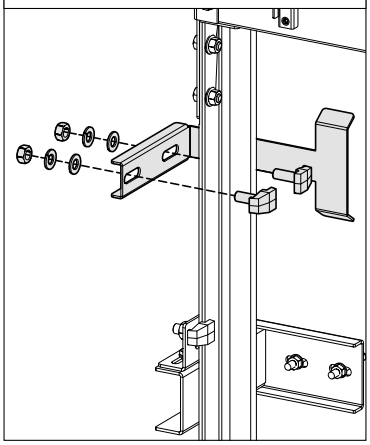


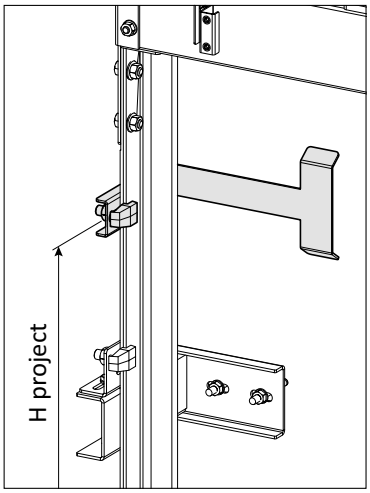
INFORMATION

The **UPPER** and **LOWER** limit stop contacts must be positioned on the same guide side.

The **BYPASS** contact must be positioned on the side of the landing contact.

KIT V0301.04.0001V03





1. **LOWER LIMIT STOP CONTACT**;
2. **UPPER LIMIT STOP CONTACT**;
3. **BYPASS CONTACT**.

- Available in models::
  - **domoFLEX 30**
  - **domoFLEX open (with MyDOMO door)**
  - **domoFLEX outdoor (with MyDOMO door)**

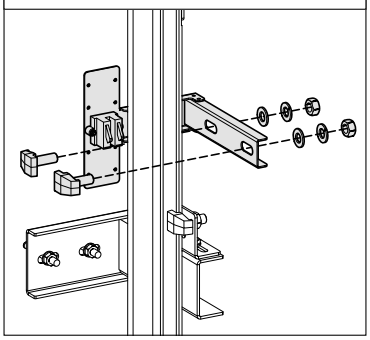
4. **SHAFT CONTACT**

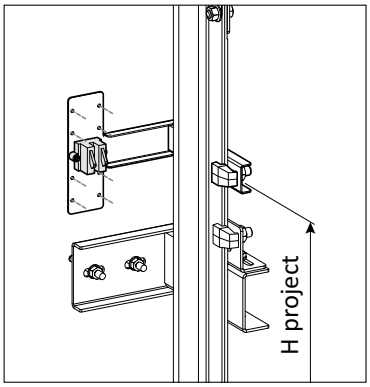
INFORMAZIONI

The contact is activated by means of a copper ramp mounted on the car sling.

The brackets have multiple holes to allow installation at different heights in case of interference with other components on the guides.

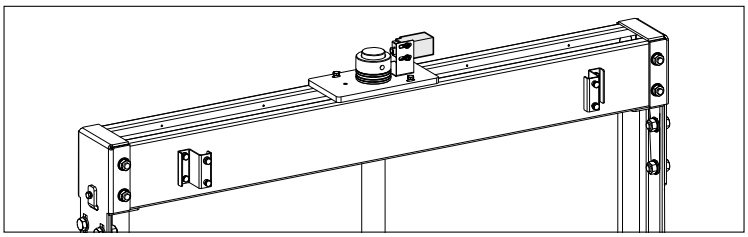
KIT V0301.04.0001V03





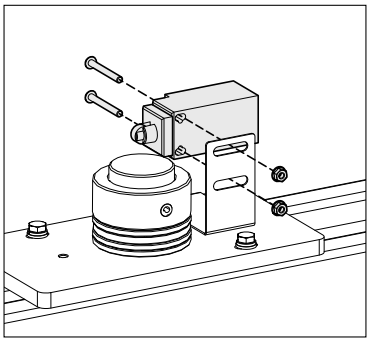
11.3. SAFETY CONTACT IN THE HEAD

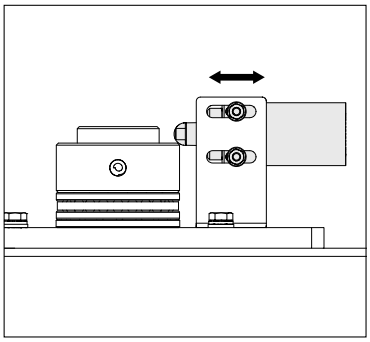
- Fit the contact in the head.



INFORMATION

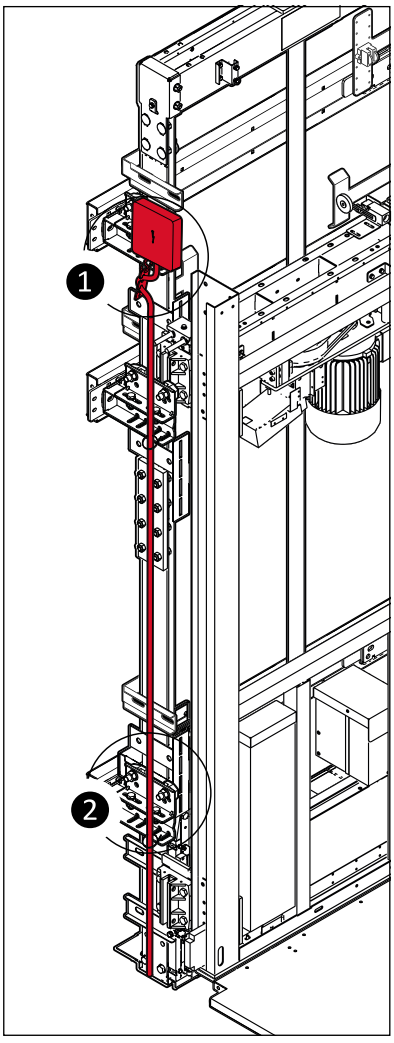
Position the contact in such a way that if the screw pushes the nut upwards, the contact is activated.

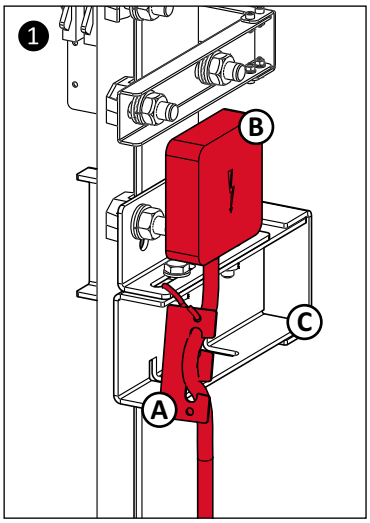


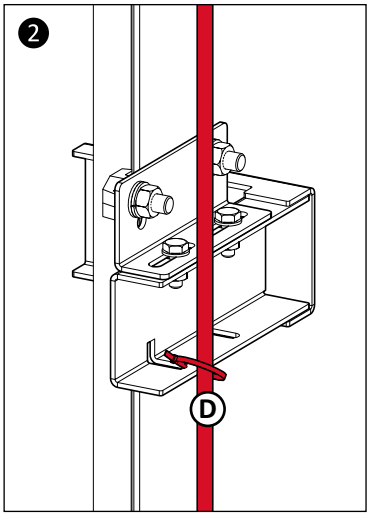


11.4. BACK OF SHAFT PRE-WIRED WITHOUT DUCT

1. Use the supplied plate (A) in order to secure the cable (shaft backside) (D) which is connected to the junction box (B) to the guide rail bracket (C) bracket closest to the midpoint of the door on the top floor;
2. Fasten the cable (shaft upright) (D) to the guide brackets below with ties.





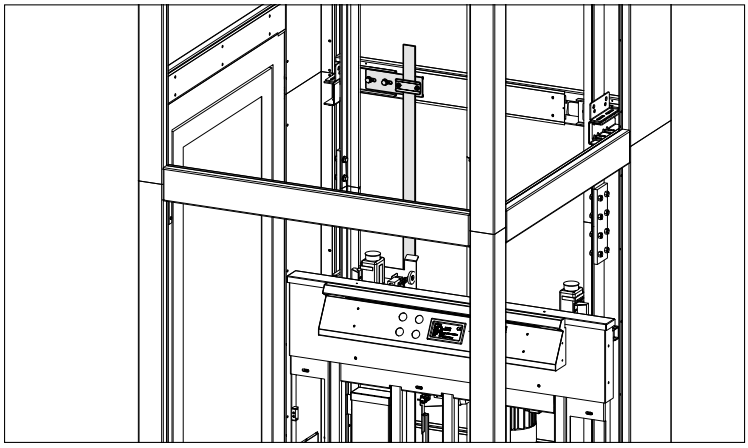


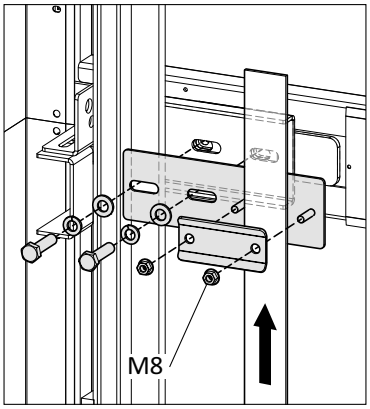
11.5. FLAT CABLE

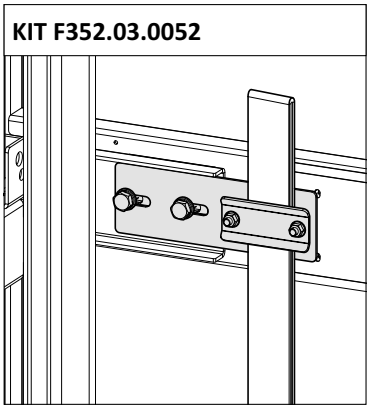
WALL INSTALLATION

- Clip the flat cable at a height calculated with the following formula:

$$H = \frac{corsa}{2} + fossa + 200\ mm$$







INSTALLATION ON STRUCTURE

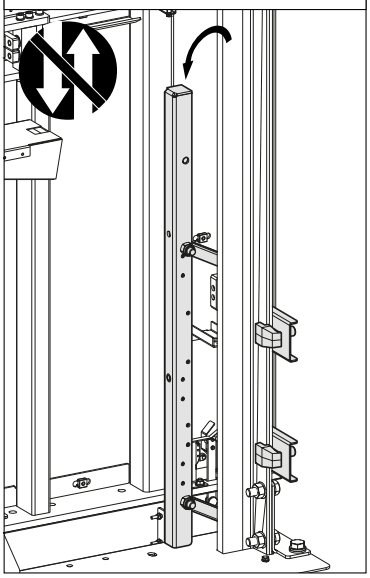
- Calculate the distance with the formula:

$$H = \frac{corsa}{2} + fossa + 200\ mm$$

and fix it on the first horizontal member above it.

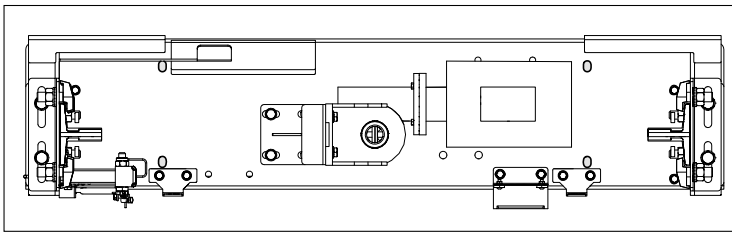
12. FINAL INSTALLATIONS

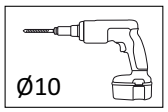
DEVICE OPEN



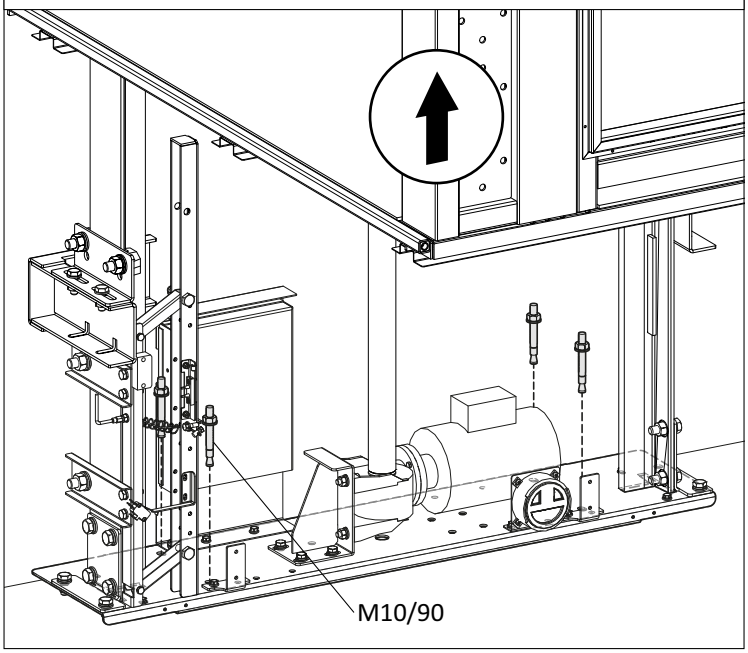
12.1. PIT TEMPLATE FIXING

- Drill the floor through the template and insert the anchoring plugs to secure the starting block.





KIT F350.23.0034

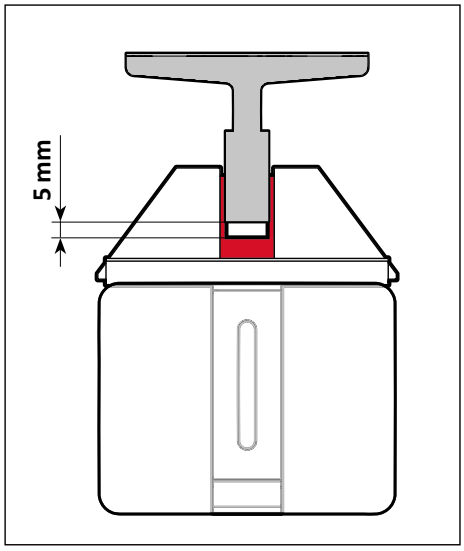


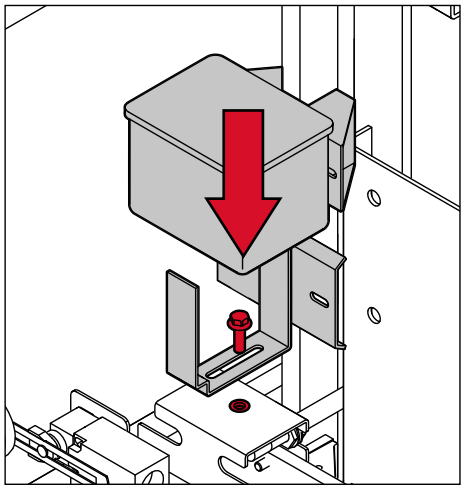
INFORMATION

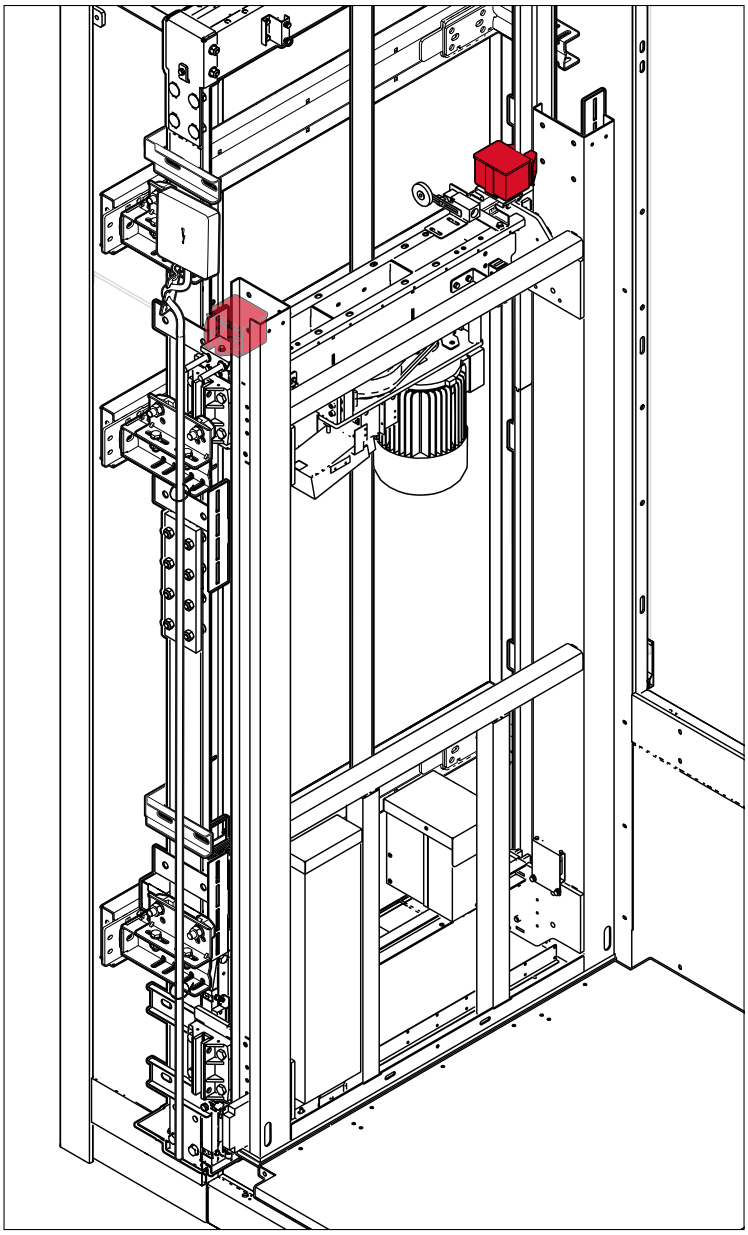
It may happen that the arrangement of the installation site does not allow pit fixing..

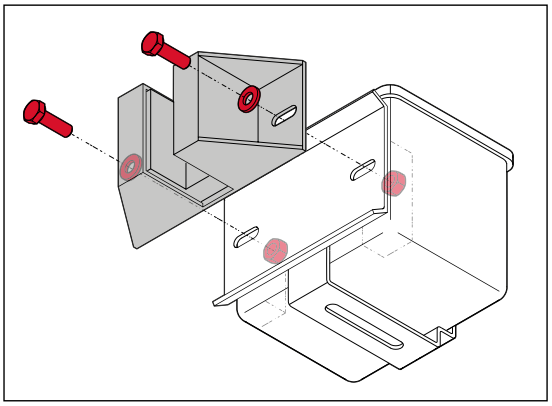
12.2. OILER INSTALLATION and ADJUSTMENT

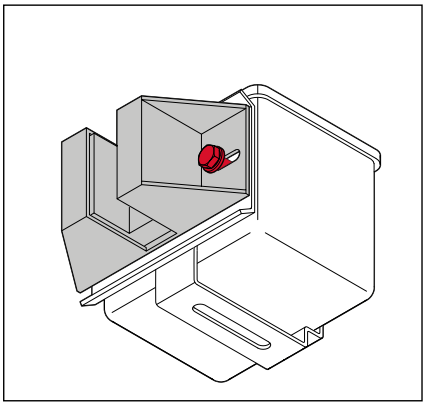
- Install the oilers and adjust them so that they rest on the guides.
- Allow a clearance of 5 mm between the top of the guide rail and the pads.



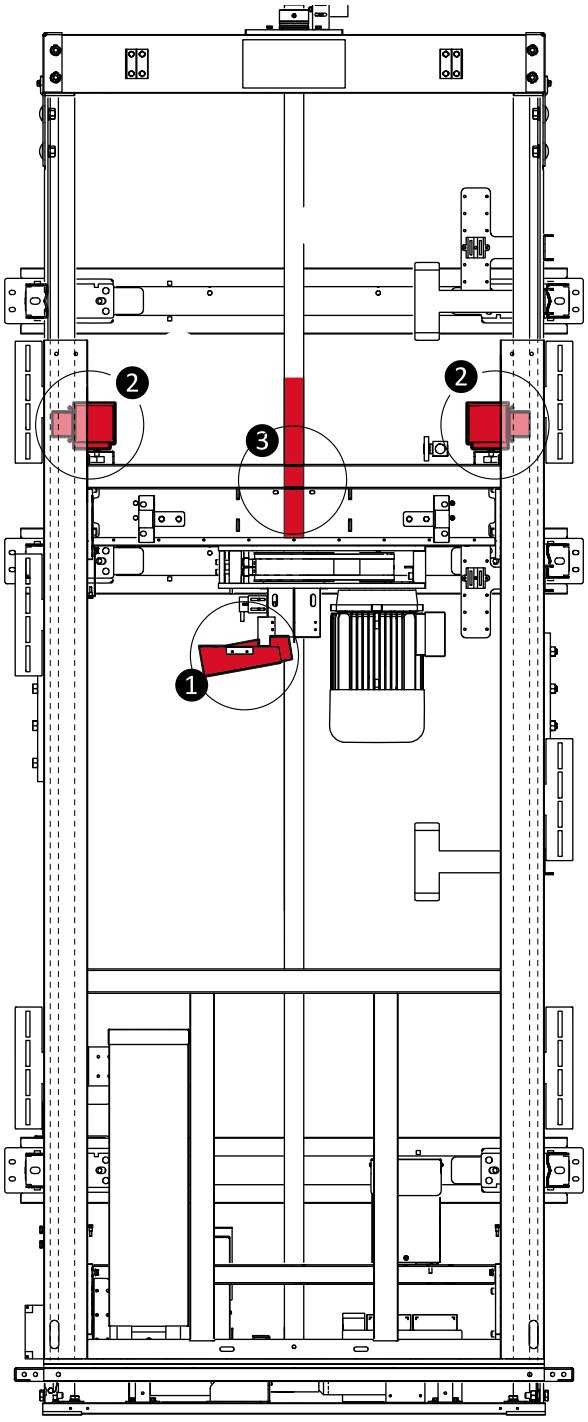






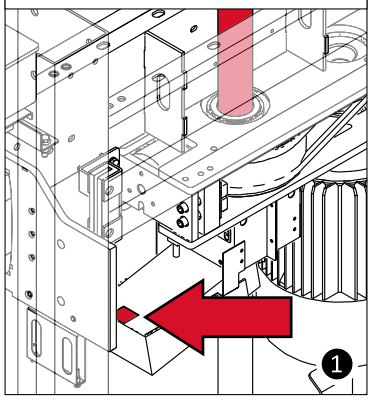


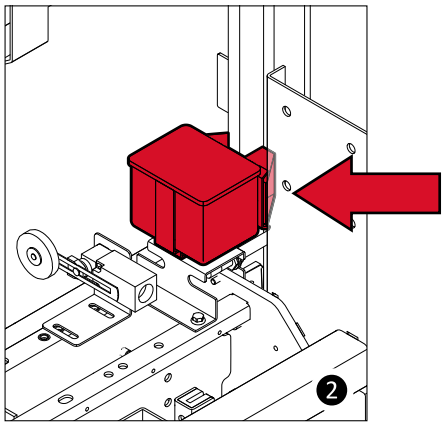
12.3. LUBRICATION OF THE SCREW AND GUIDES

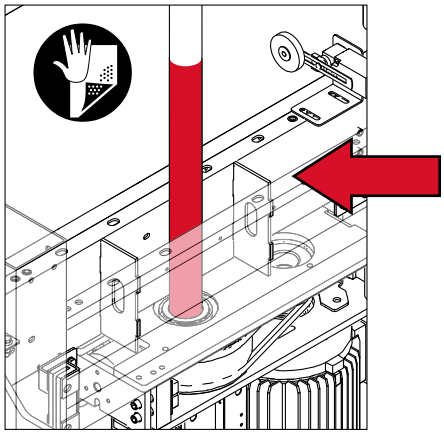


- Fill the screw oiler ❶ the oil supplied (ISO VG-220EP).
- Fill guide oilers ❷ with ISO VG-220 EP oil or higher.
- With a clean cloth soaked in oil, oil the operating screw ❸ in the part above the screw oiler being careful not to dirty the belts.

KIT F352.23.0001





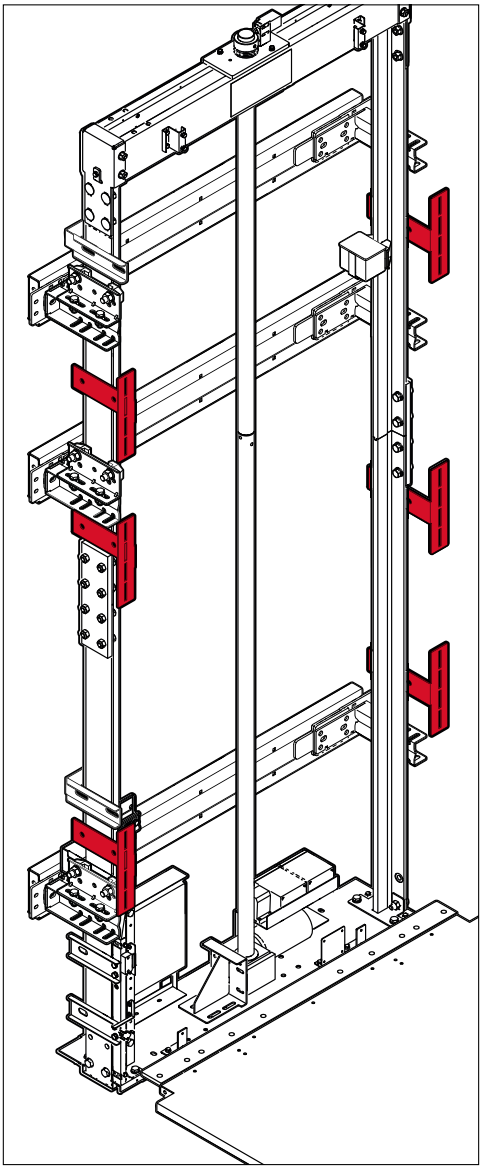


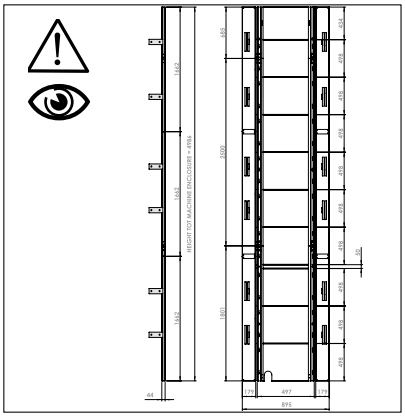
INFORMATION

The sponge in contact with the screw must always be well oiled. Manually oil even that specific point while the sponge is soaking up the oil injected.

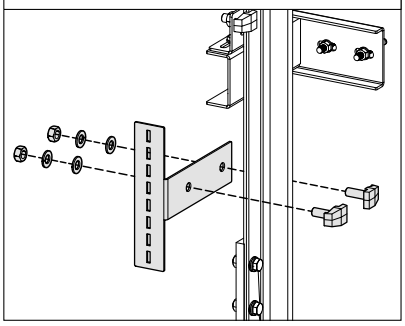
12.4. INSTALLATION OF SIDE PANELS

- Temporarily install the brackets for fixing the mechanism casing on the guide rails, checking the position indicated in the project drawing.





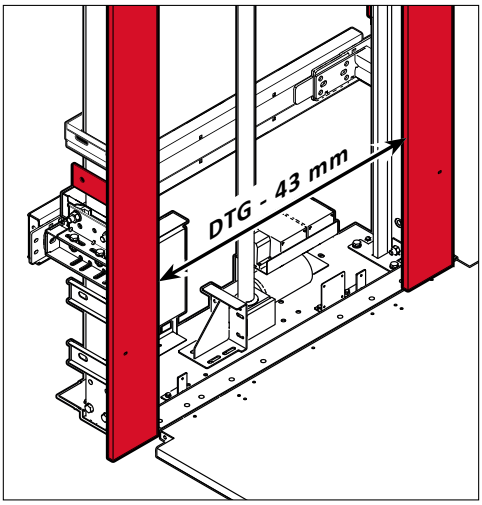
KIT V0301.04.0001V03



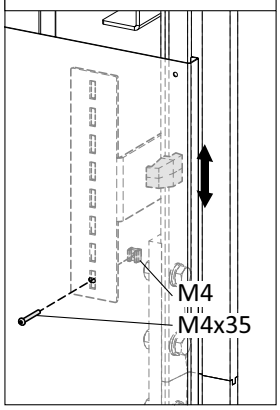
INFORMATION

The reinforcement plates only rest on the side casing, no fixing is required.

- Install the reinforcement plates together with the brackets for fastening the mechanism casing onto the guide rails.



KIT F352.23.0008

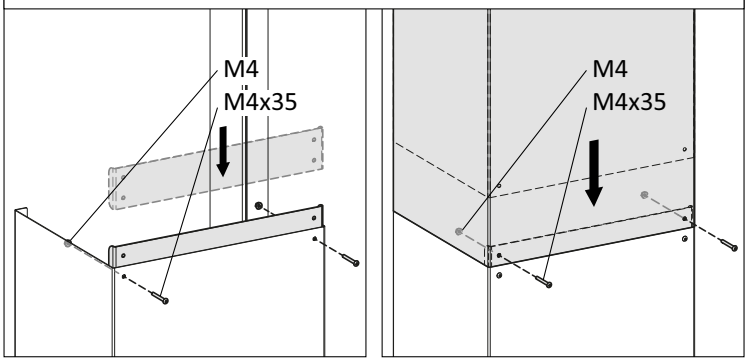


INFORMATION

Check the correct positioning on the project drawing.

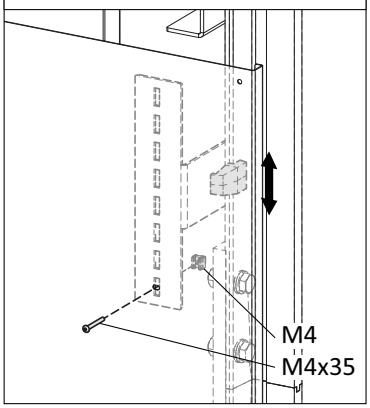
- Install the junction plate on the panel.

KIT F352.23.0008



- Then fix the other panels along the height of the support brackets.

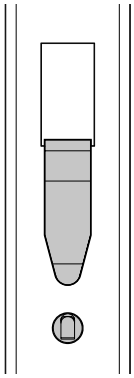
KIT F352.23.0008



12.5. PRE-ASSEMBLY CENTRAL PANELS

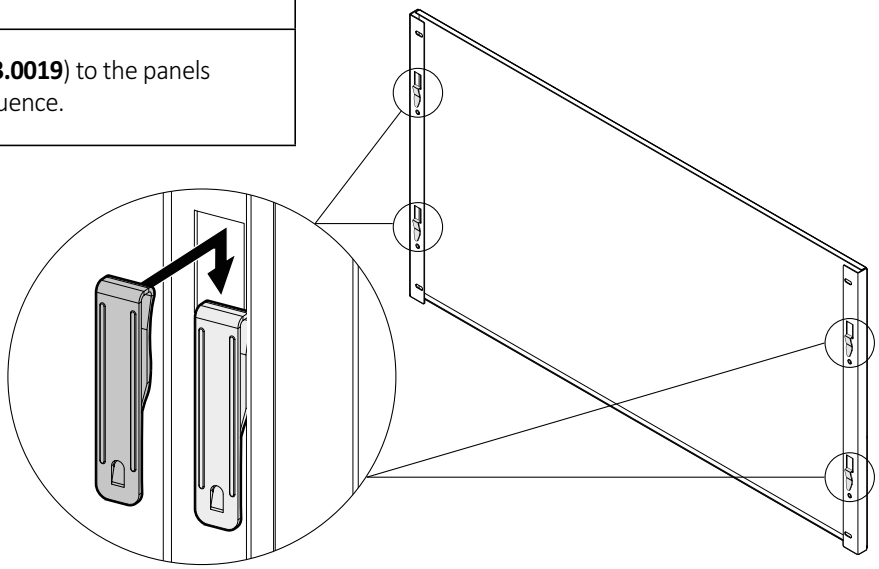
INFORMATION

Pre-install the fixing clips (**KIT C002.23.0019**) to the panels before starting the wall assembly sequence.



Fixing clip - front view

KIT C002.23.0019



12.6. INSTALLING CENTRAL PANELS

INFORMATION

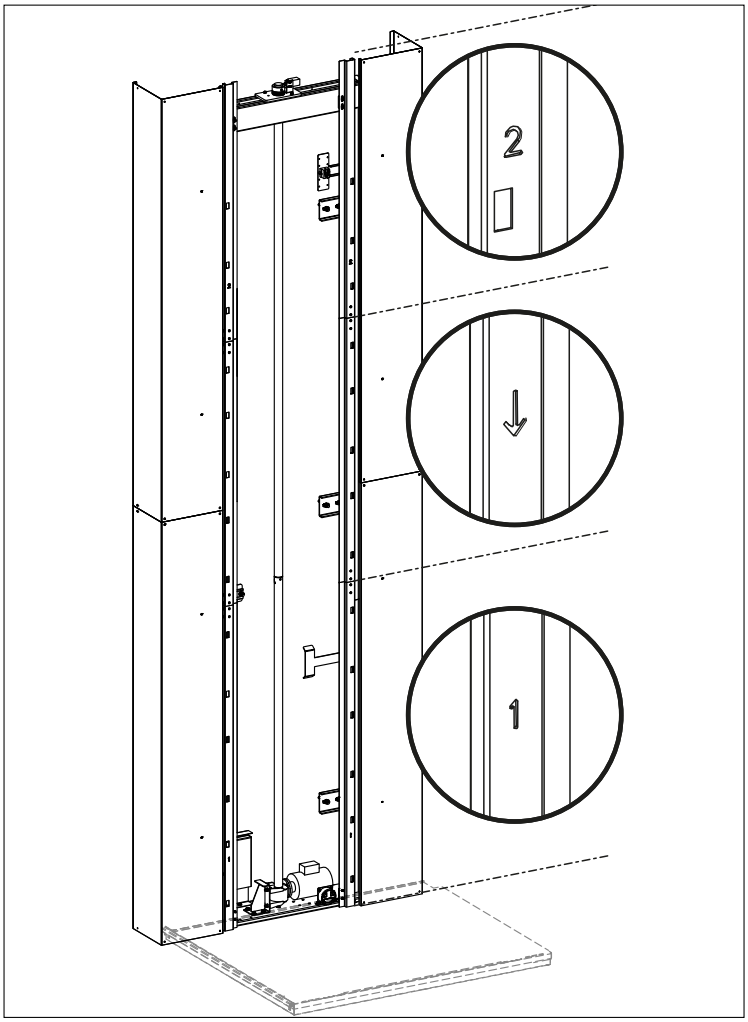
Check the engravings on the panel guides for correct positioning:

1 - **guide in the pit**

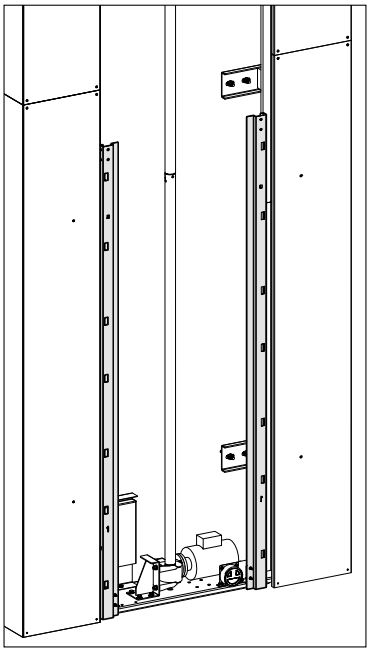
↓ - **central guides**

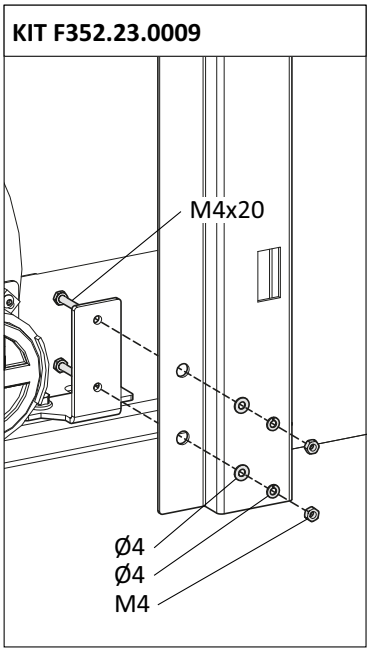
2 - **head guide**

- Fix the panel guide in the pit on the prepared bracket (positioned on the starting block).

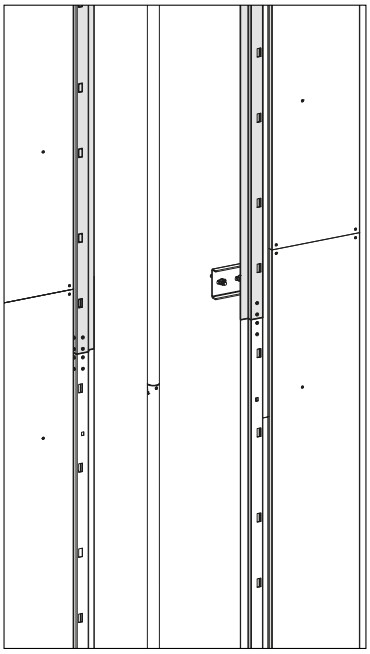


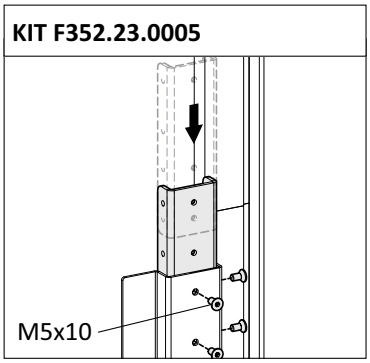
- Fix the guide rail of the panels in the pit on the prepared bracket (positioned on the starting block).

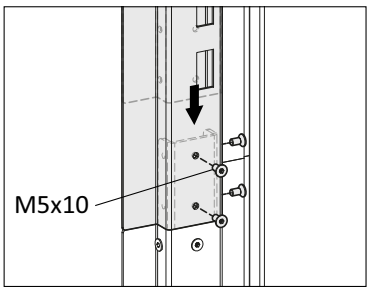




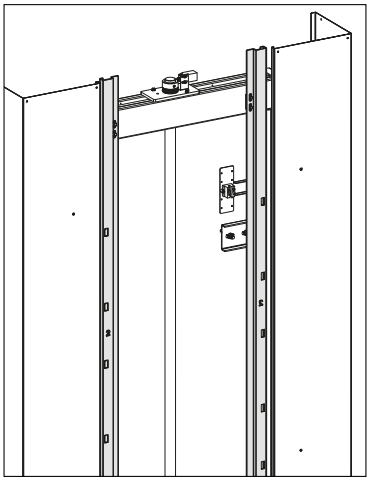
- Assemble the joint plate and continue with the assembly of the panel guides.

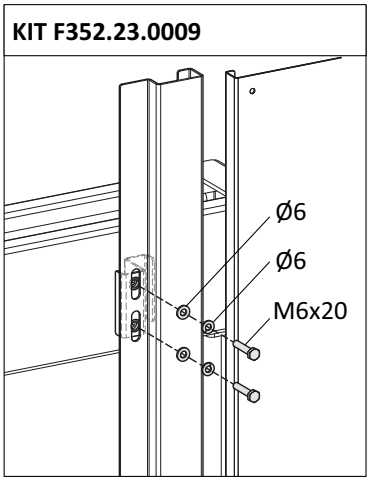






- Fix the panel guide at the head to the bracket provided on the crossbar.





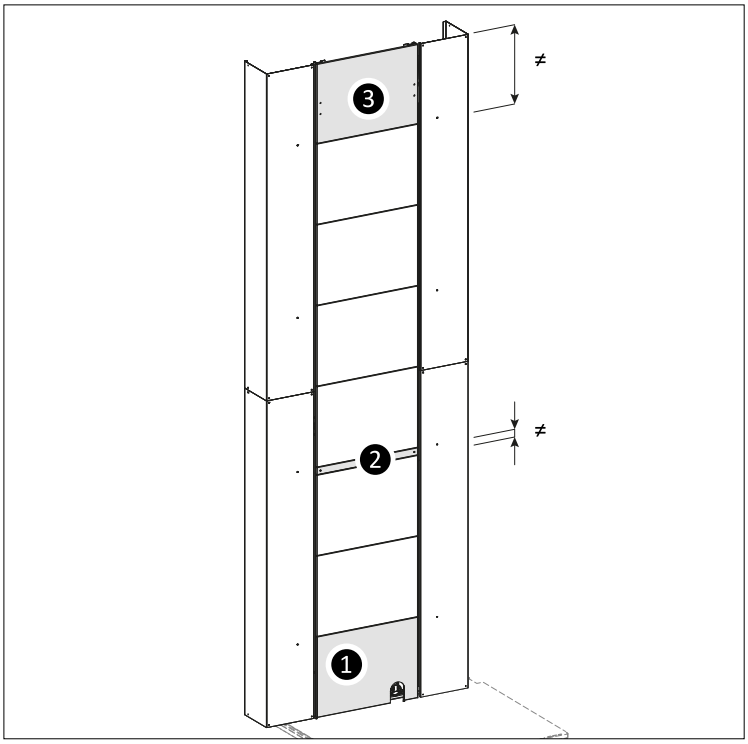
INFORMATION

Check the type and height (H) of the panels to ensure that they are correctly positioned:

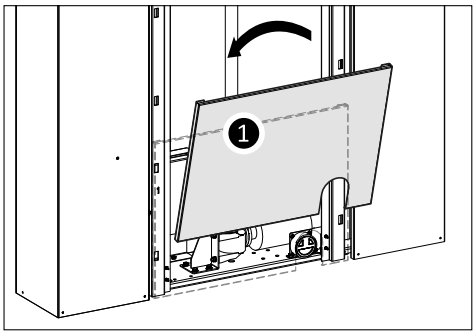
1. panel with recess for the pit bottom stop: in pit
2. fourth panel (always H 50 mm)
3. head panel with different height (H ≠)

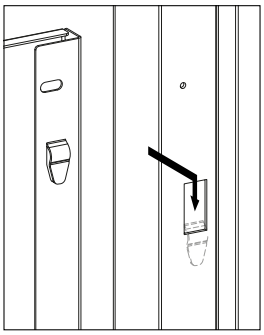
the others are all the same

In case of travel greater than 3 m there will be one or more support panels 2.

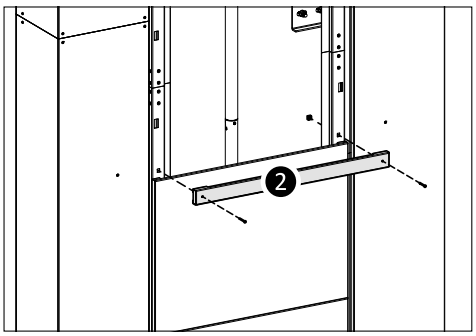


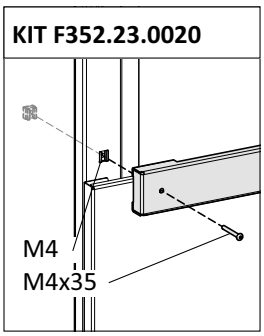
- Insert the central panels on the panel guides using the hooks on the panels.

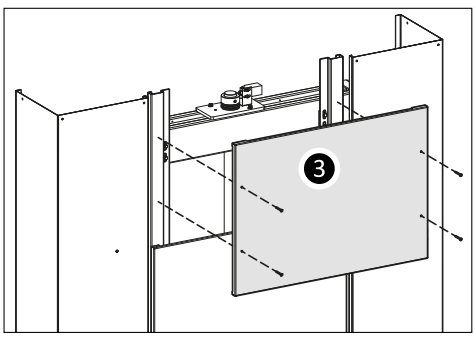


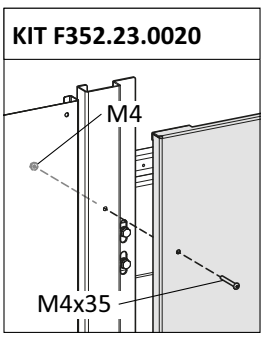


- Fasten the fourth panel and the one at the head with the screws.



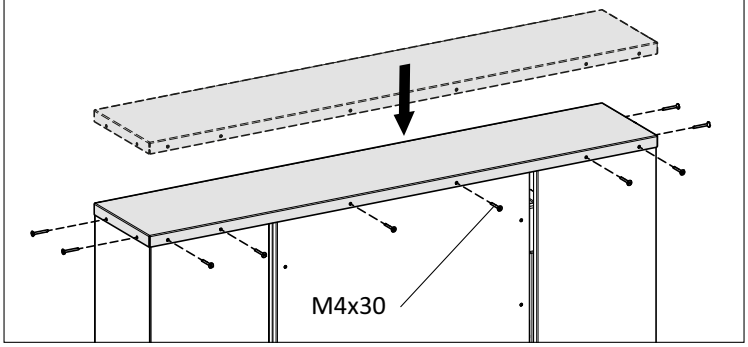






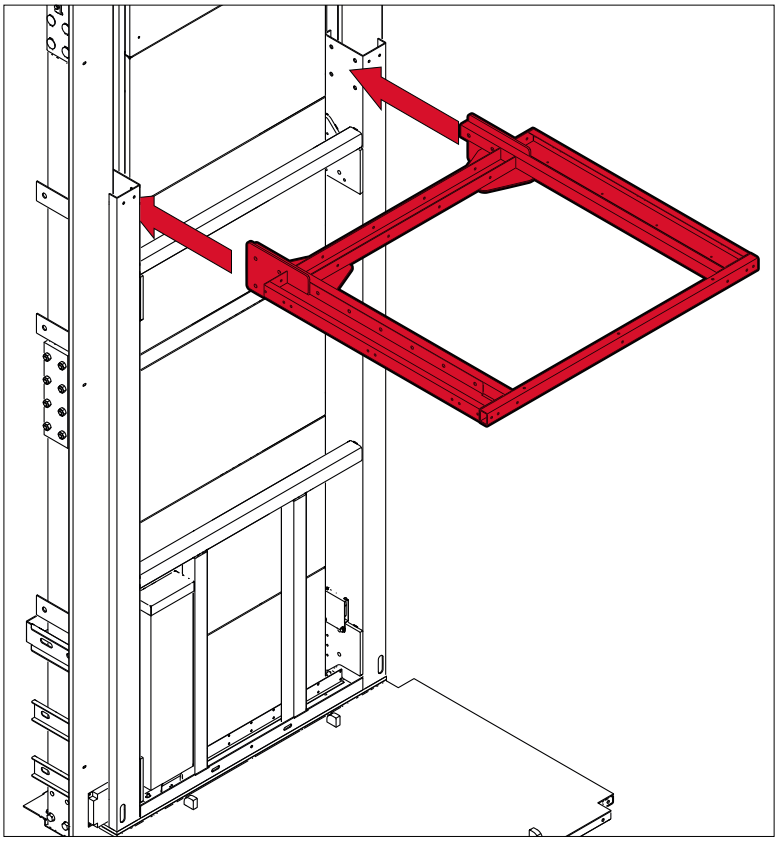
- Install the top crankcase cover.

KIT S102.23.0003

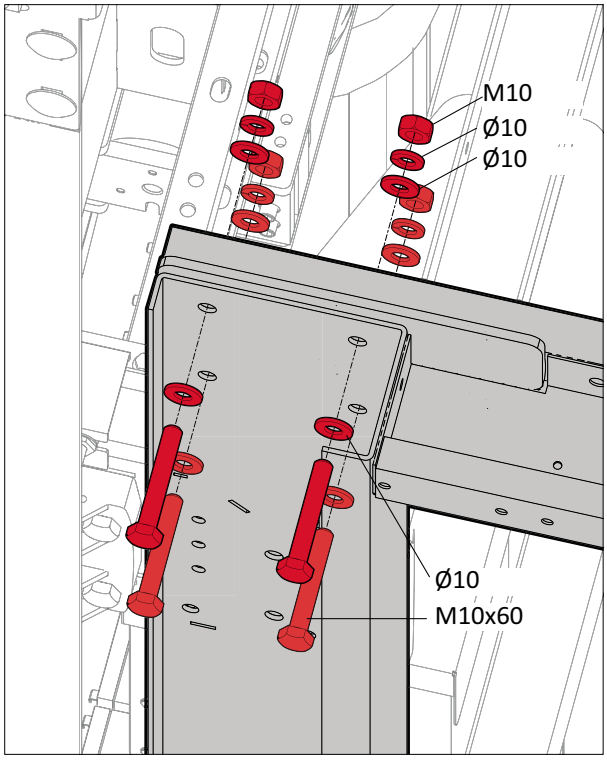


12.7. HANDRAIL FITTING

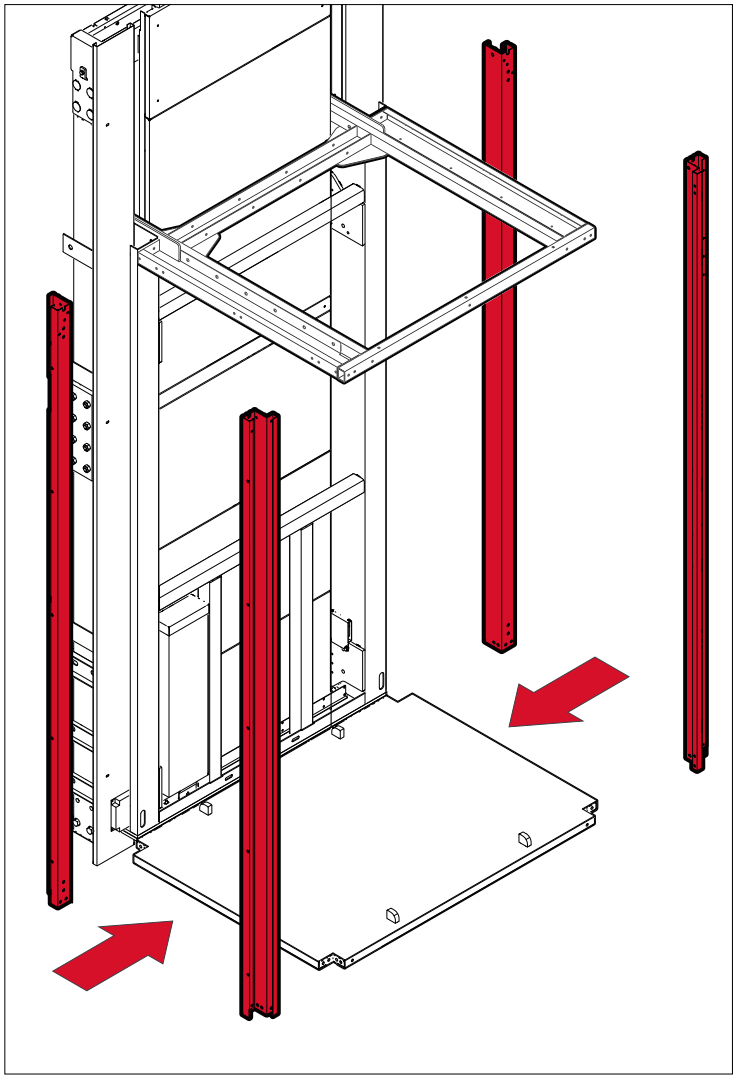
- Place the upper frame

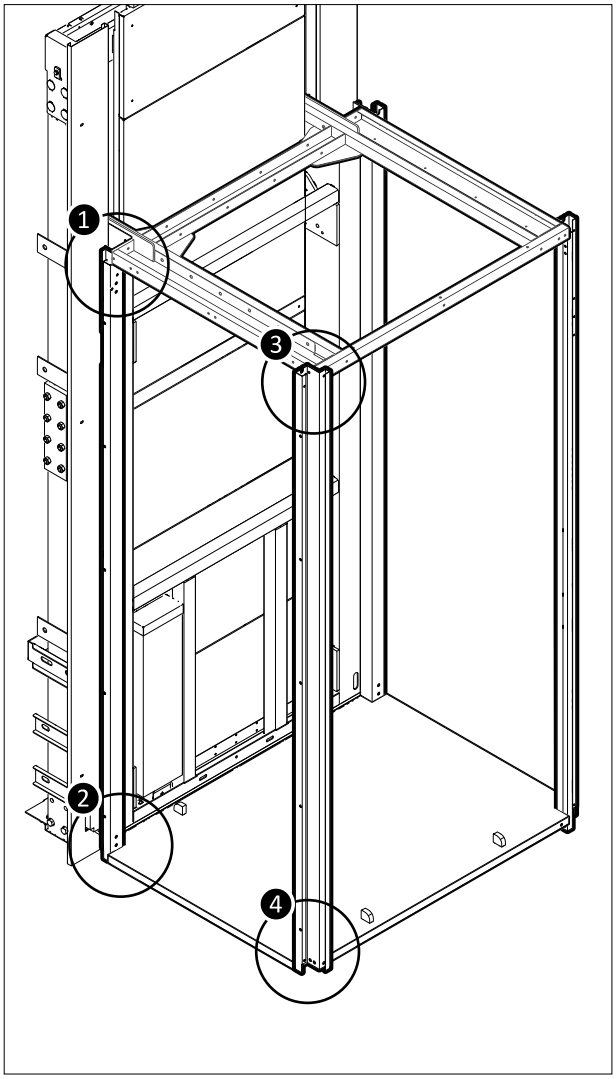


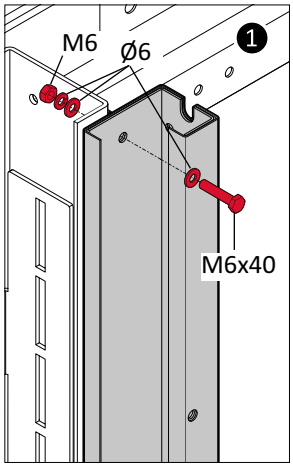
- Secure with the supplied screws

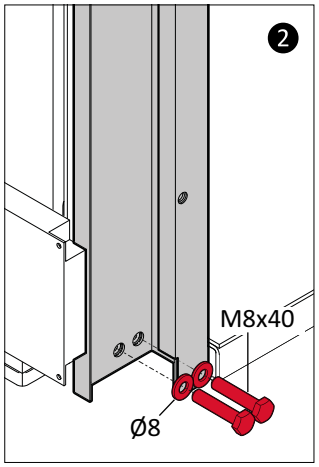


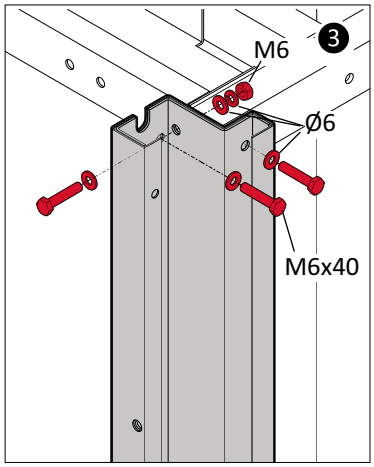
- "Place the uprights at the four corners and fix them with the screws supplied

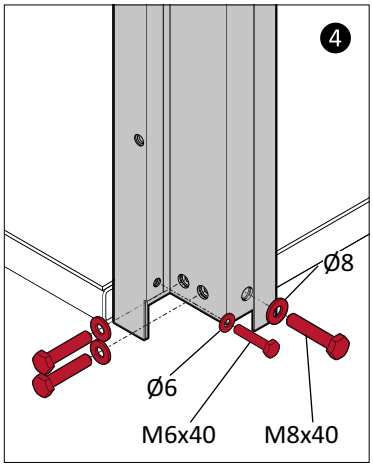




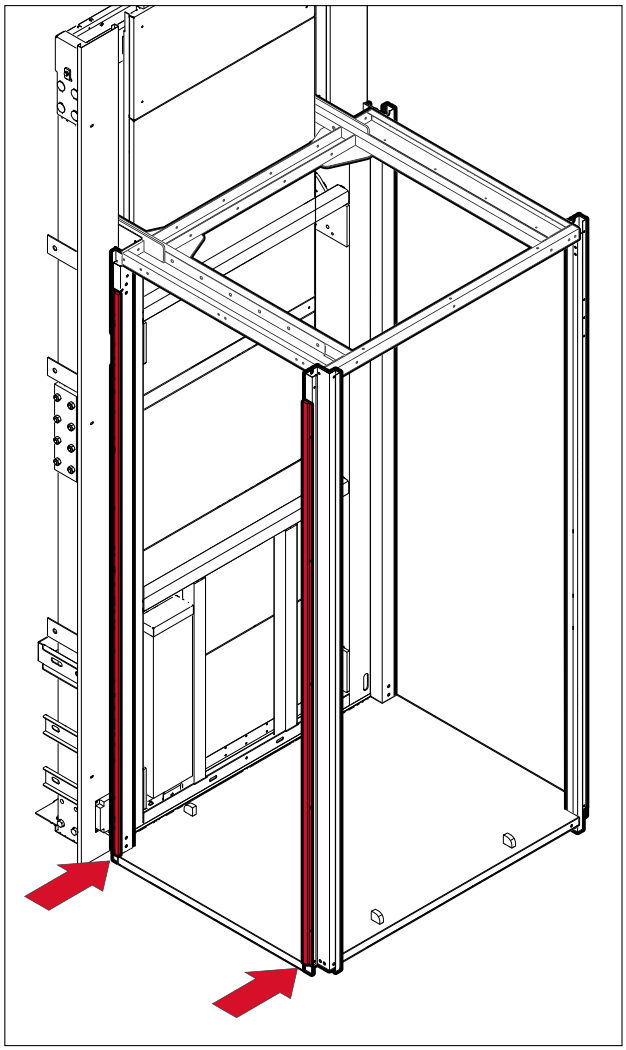


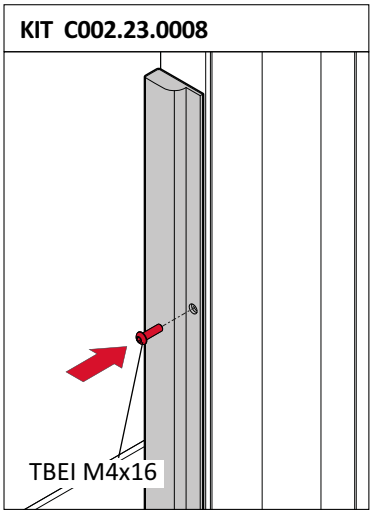


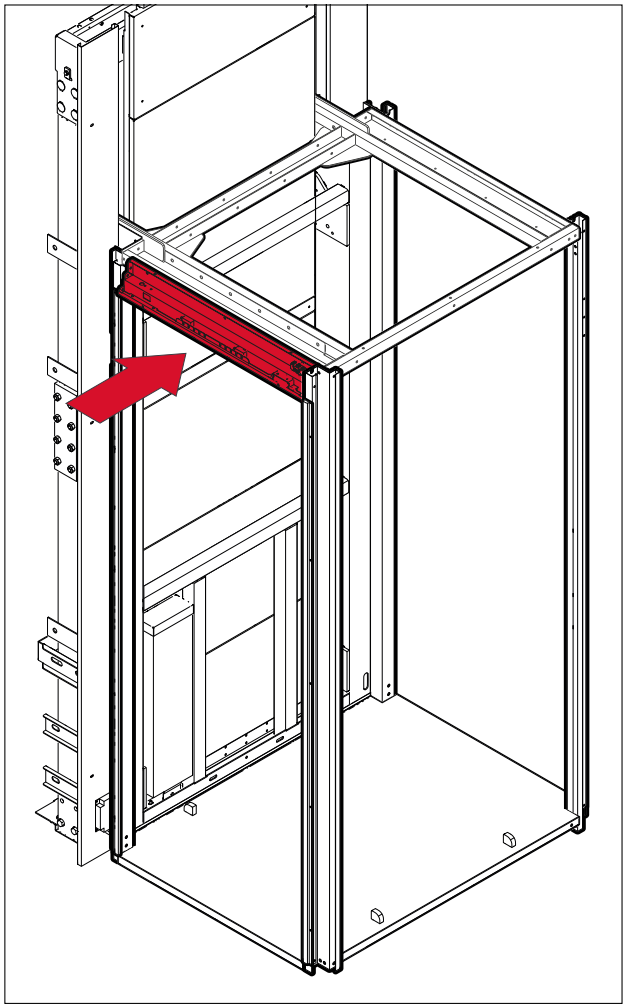




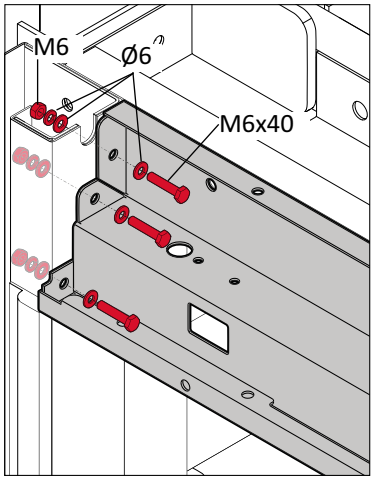
- Place the safety light curtains on the uprights.
- Fix them with the special screws supplied.



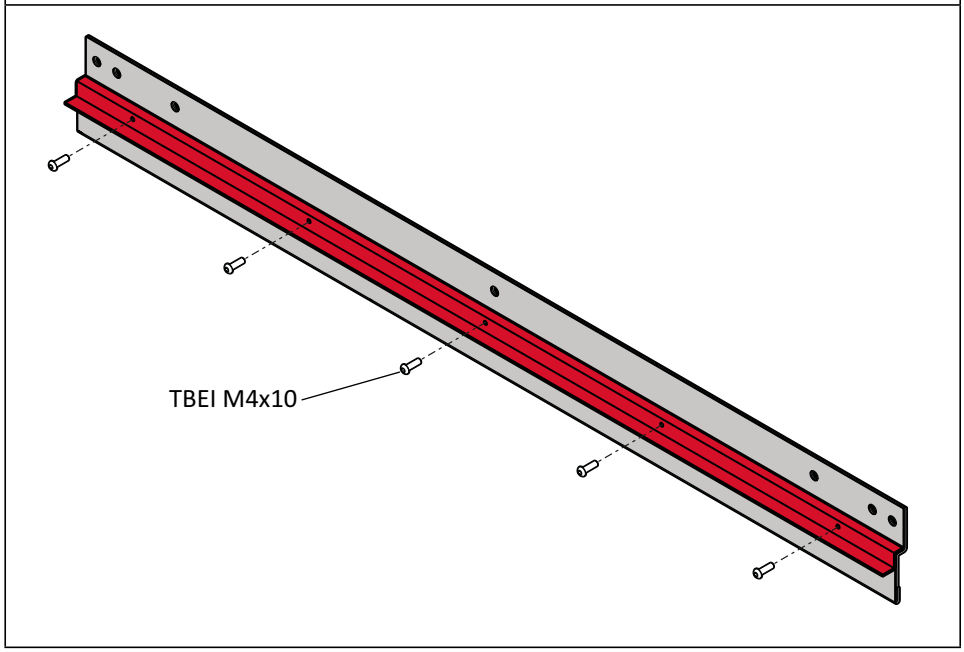


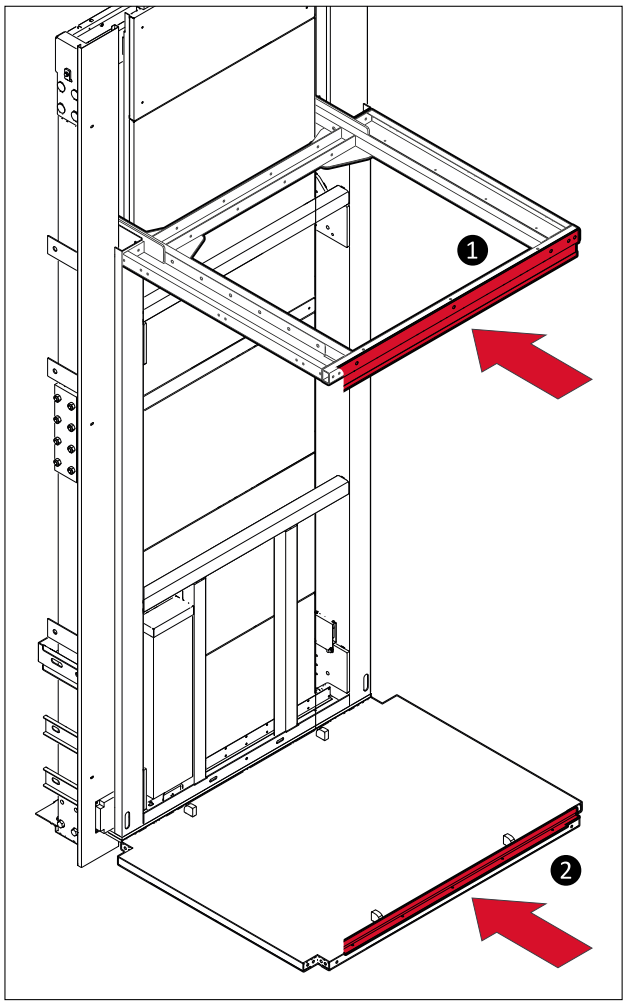


- Place the crossbeams between the uprights
- Fix them with the special screws supplied.

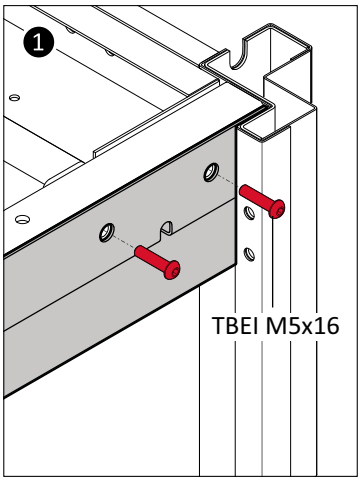


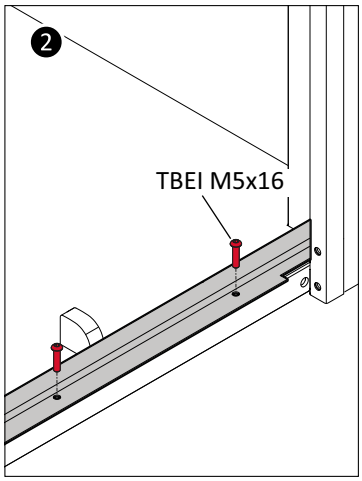
PRE-ASSEMBLY OF THE COUNTER-CEILING SUPPORT BAR

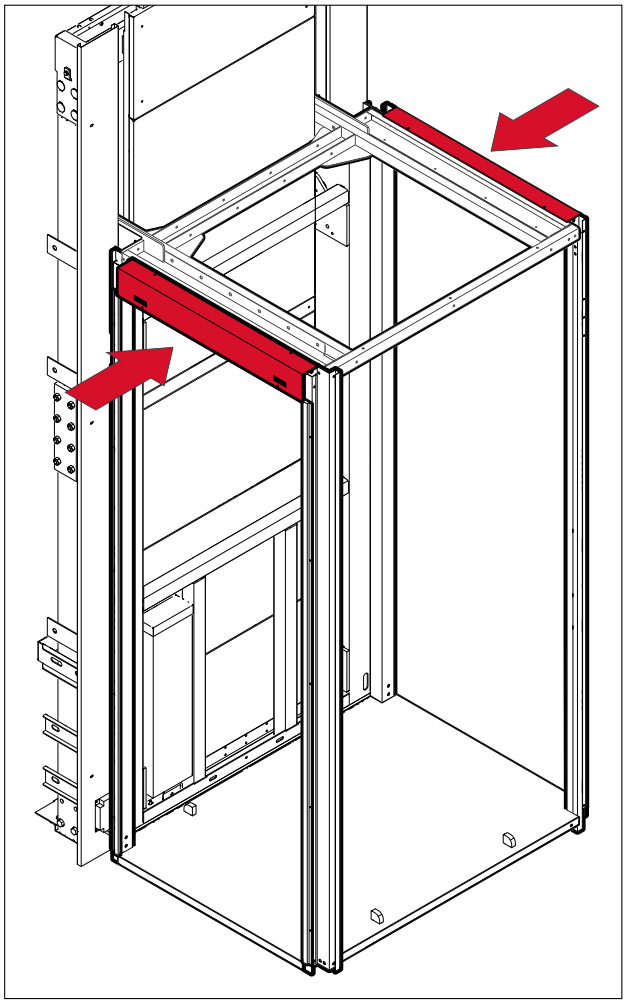




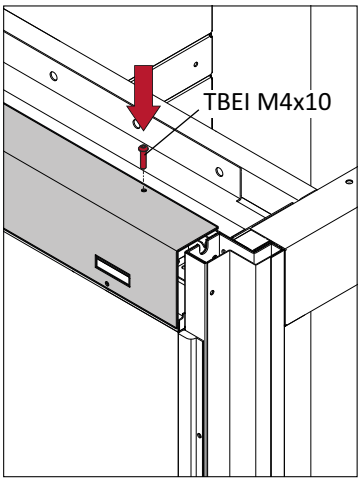
- Position the internal ceiling and floor glazing stoppers. Fix them with the special screws supplied.

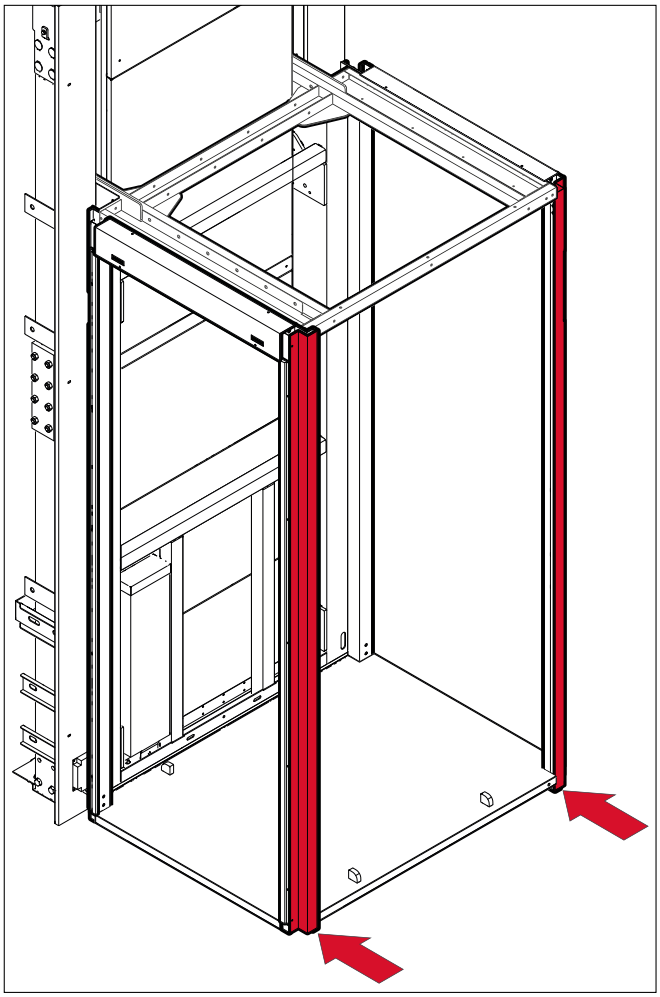




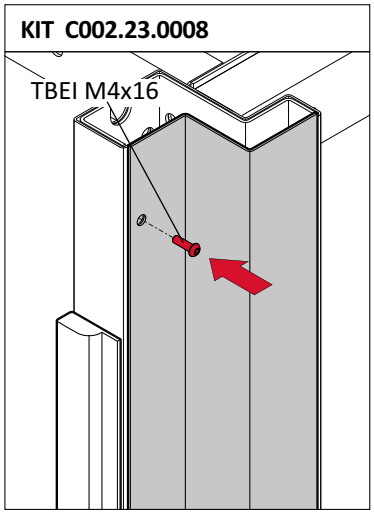


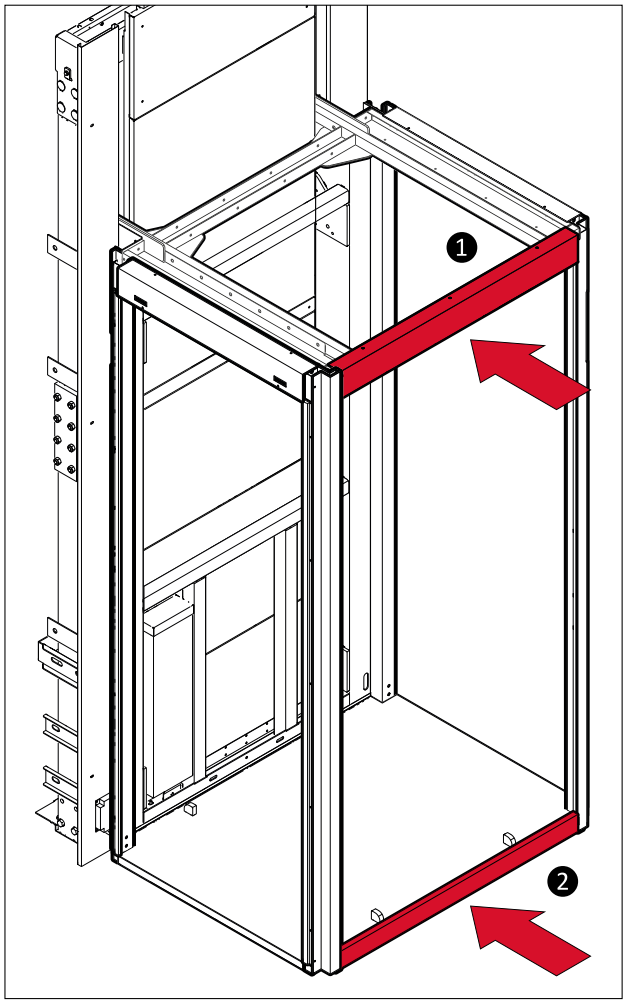
- Position the door frame covers
- Fix them with the special screws supplied.



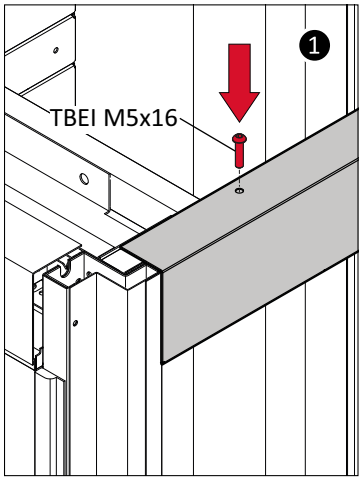


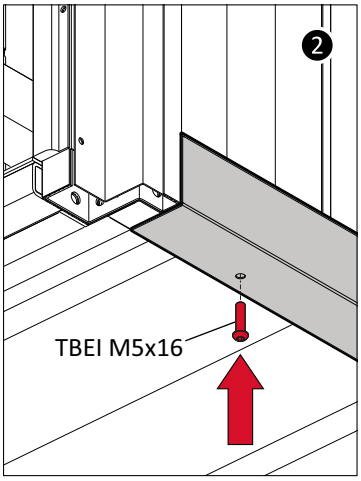
- Position the upright covers at the two outer corners
- Secure them with the screws provided.

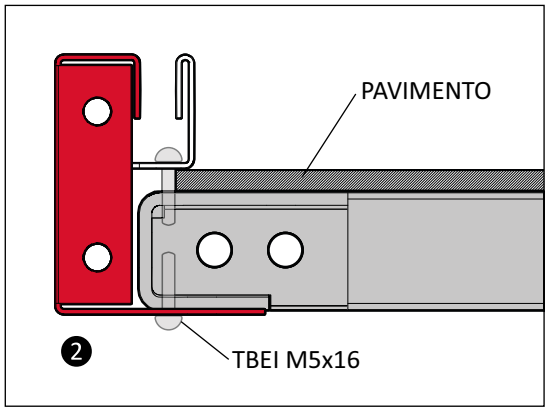




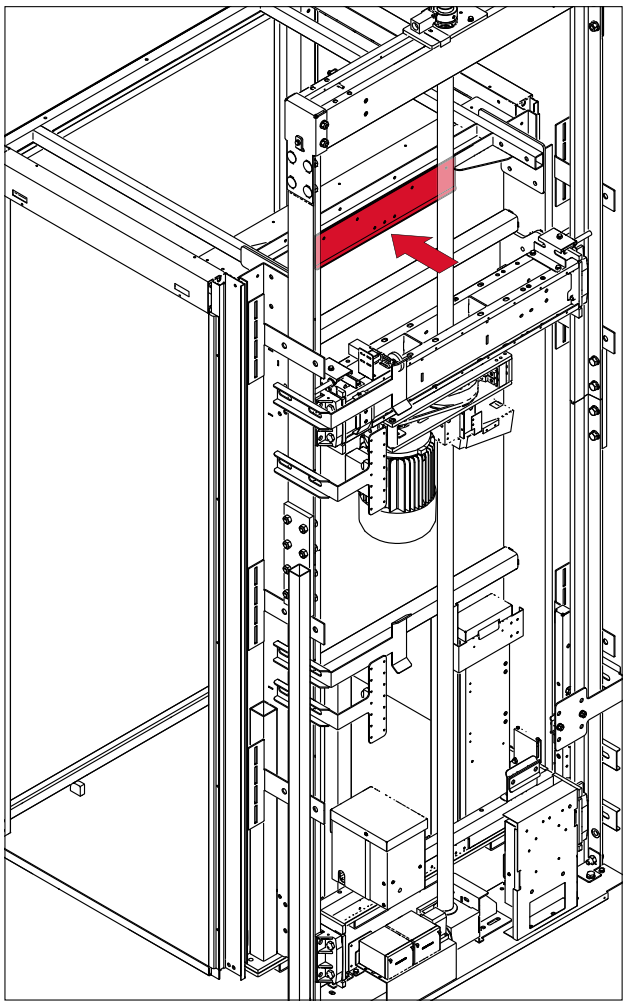
- Position the external glazing stoppers
- Fix them with the special screws supplied.

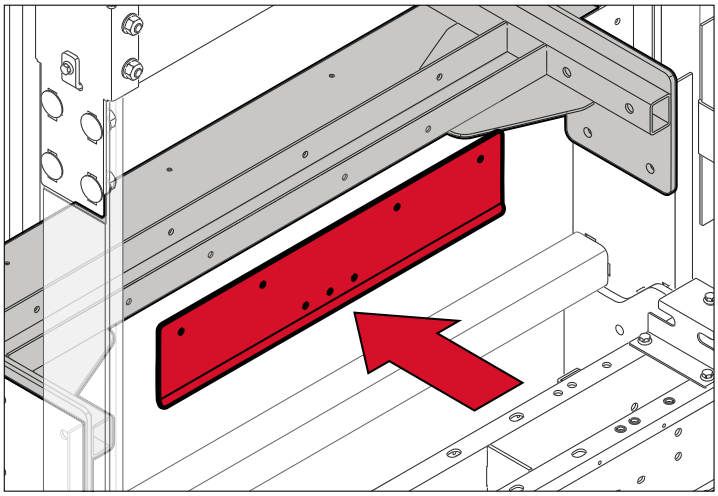


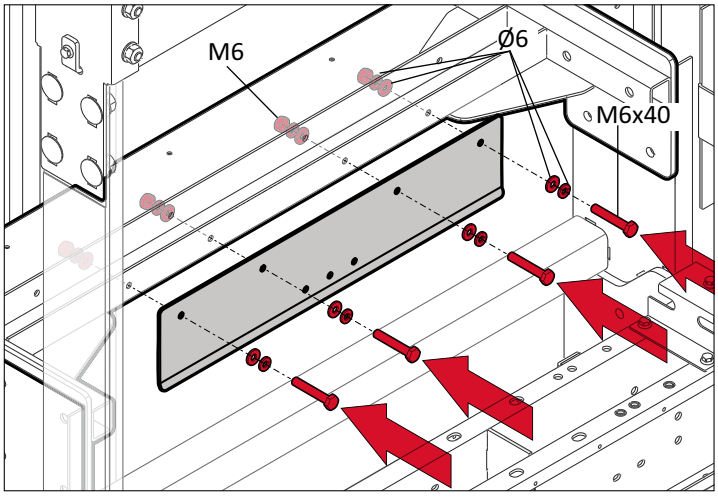


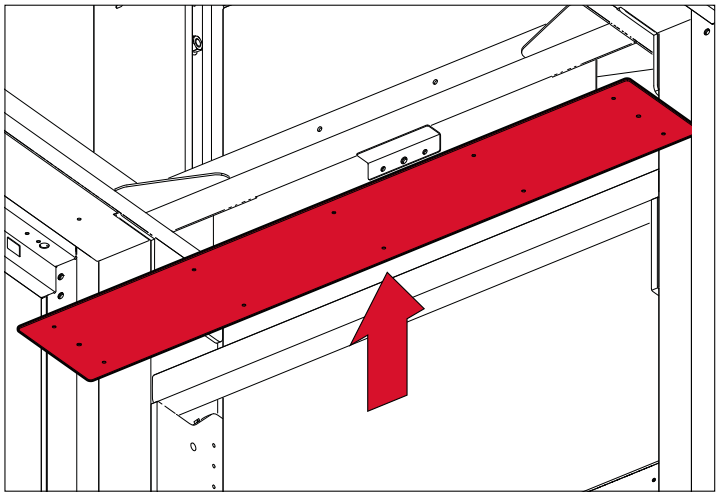


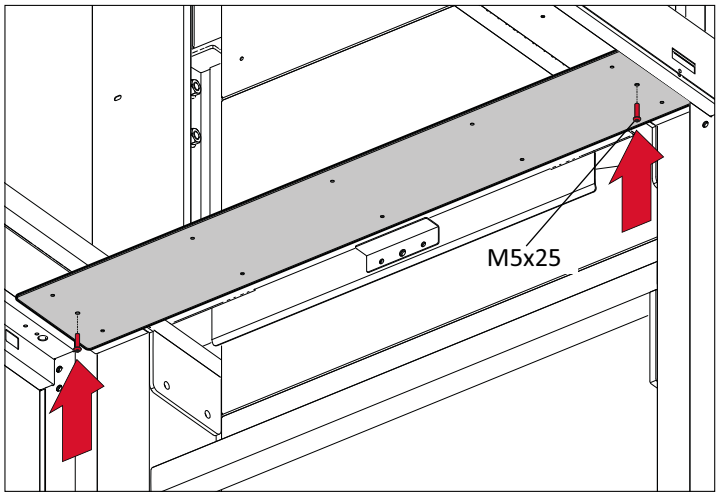
- Position the plate of the wall panels and car push button panel.
- Fix them with the special screws supplied.





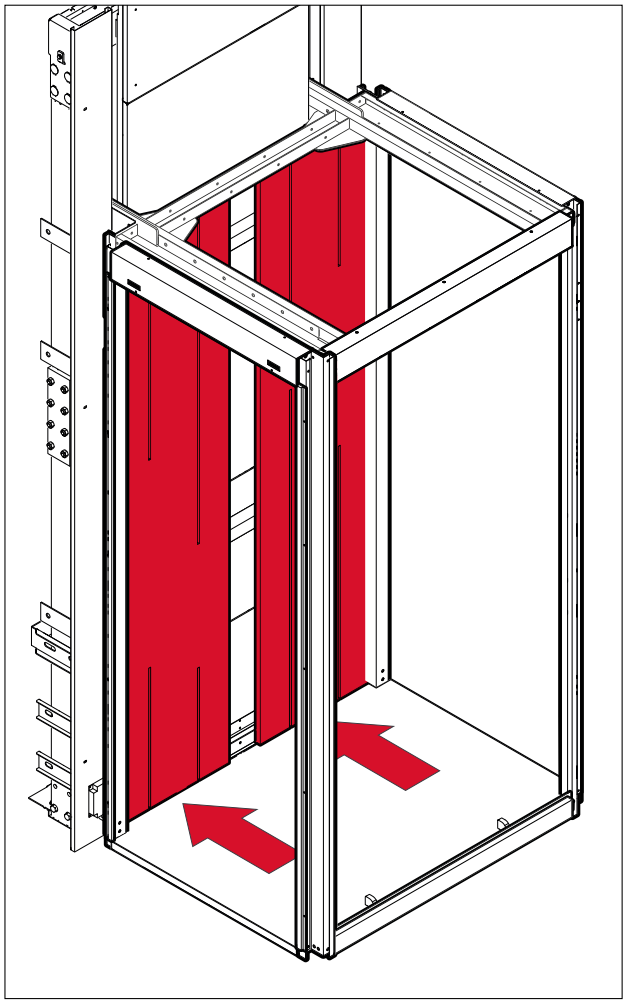




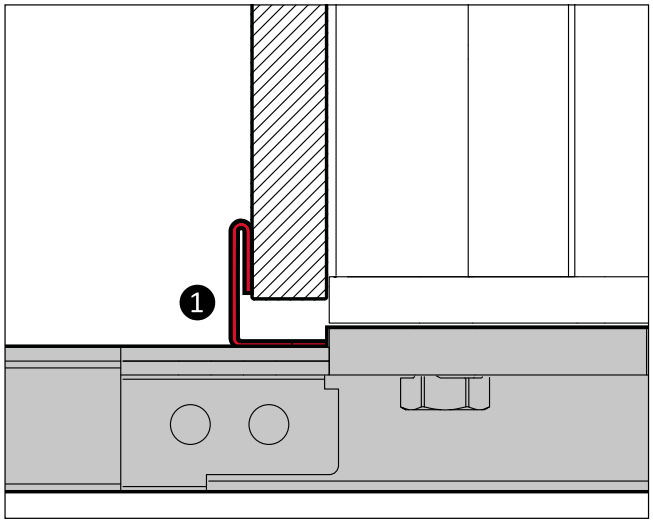


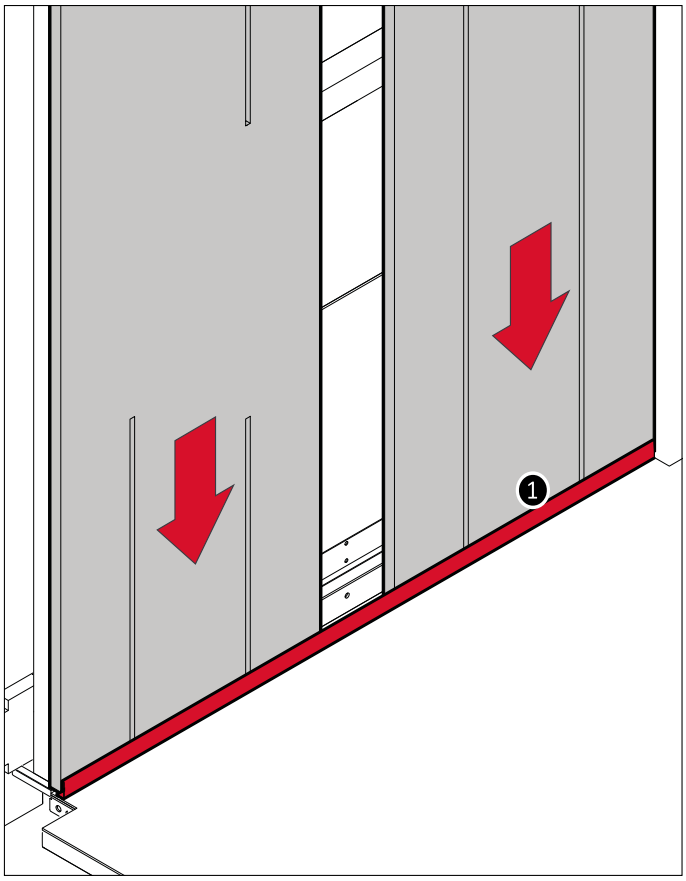
- Position the stop plate of the car counter-ceiling.
- Fix them with the special screws supplied.

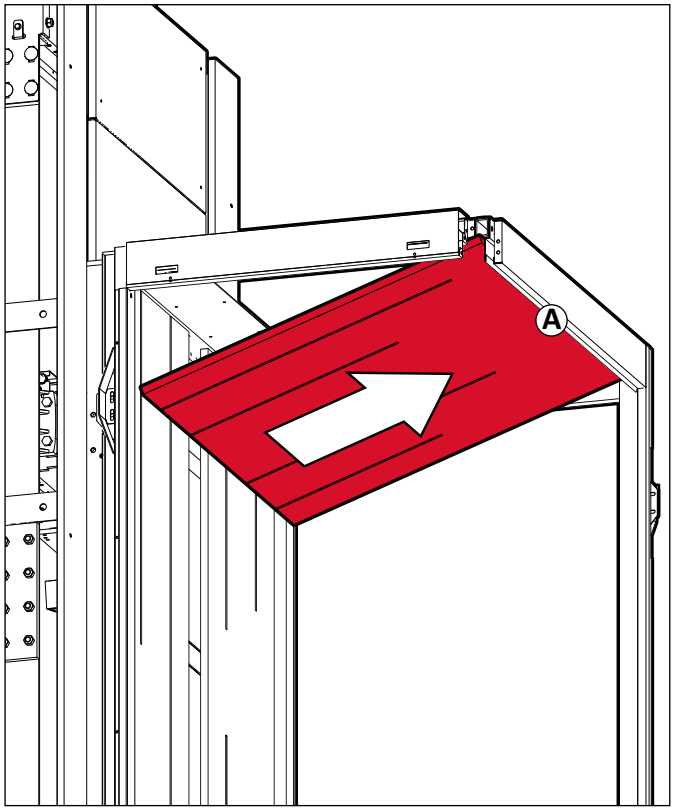
- Place the car wall panels

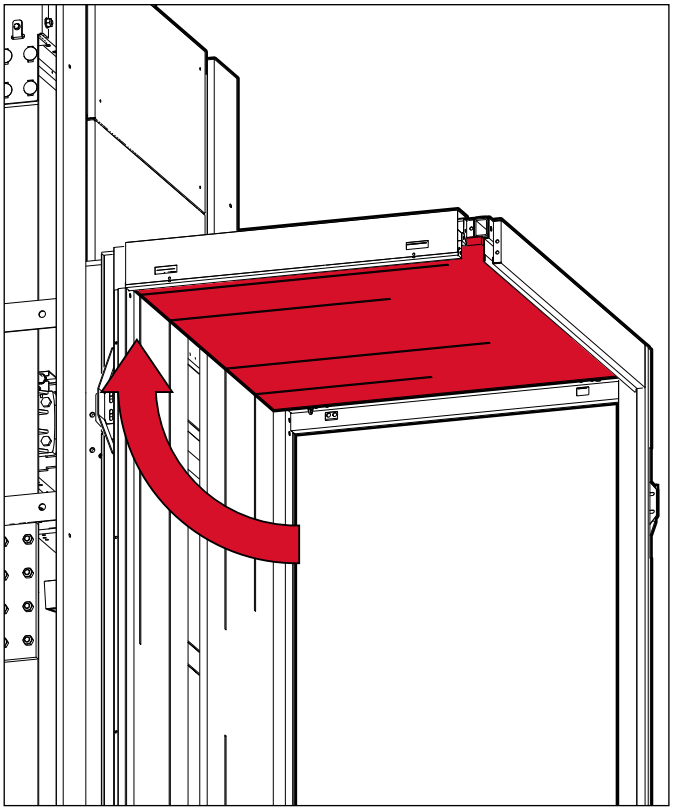


- Accertarsi di avere inserito ipannelli nell'apposito alloggiamento ❶

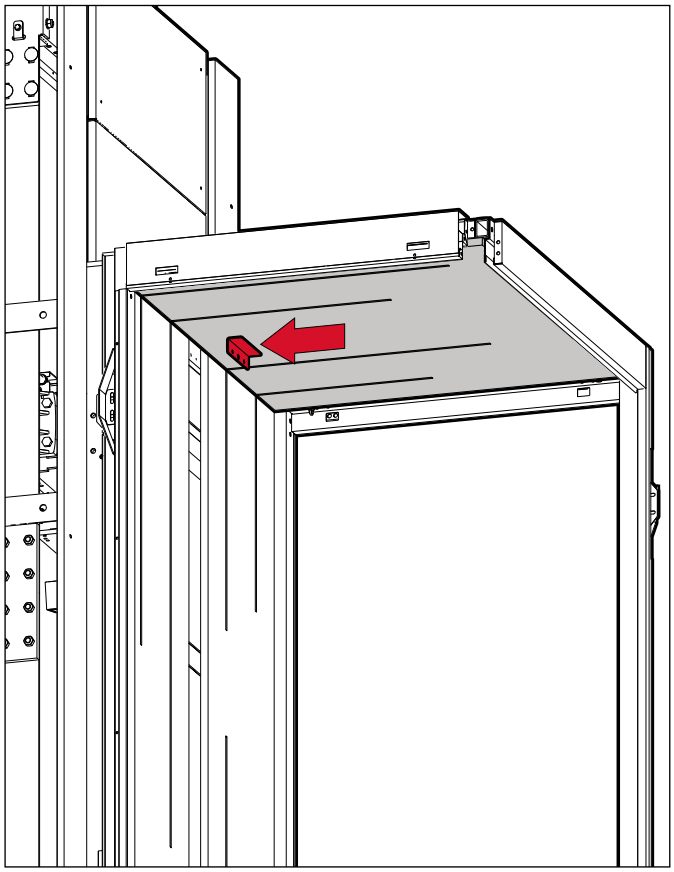


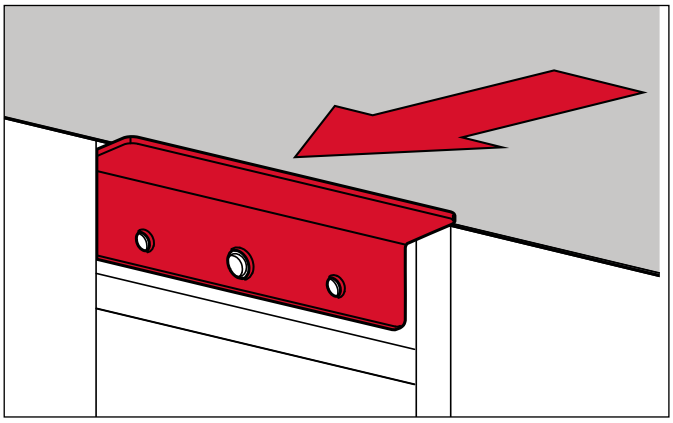


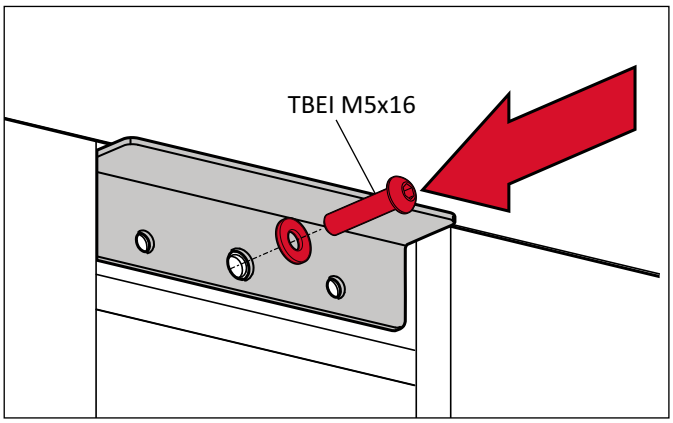




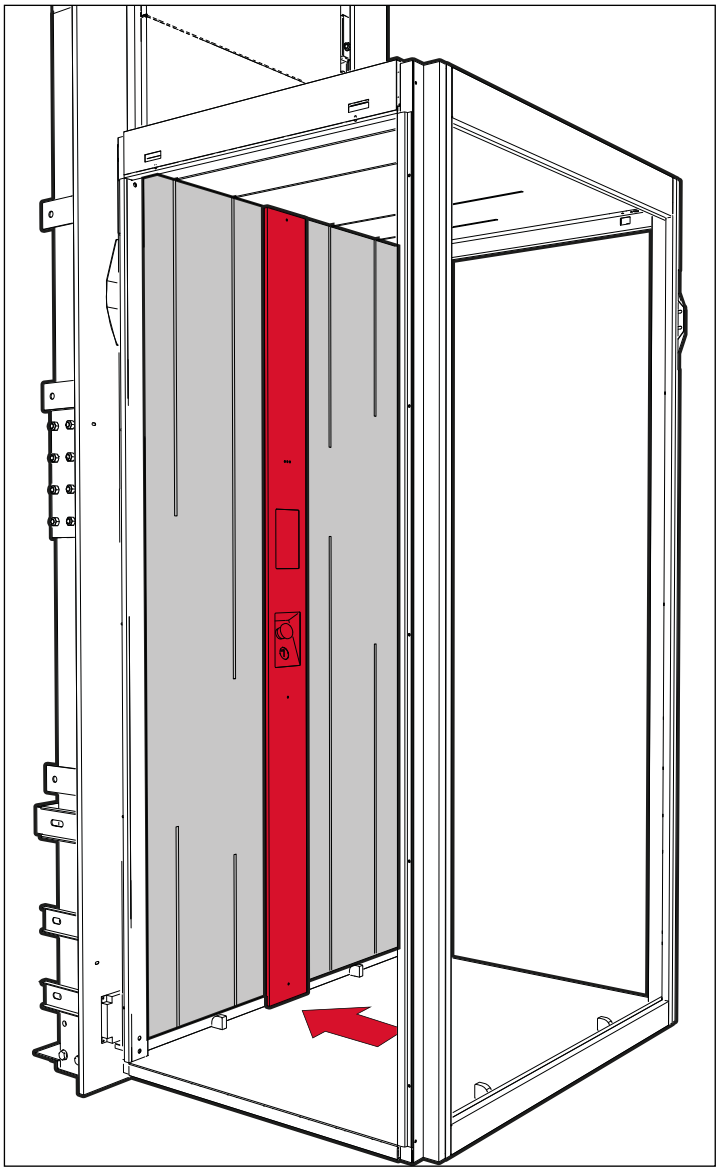
- Insert the counter-ceiling panel in the appropriate housing (A)





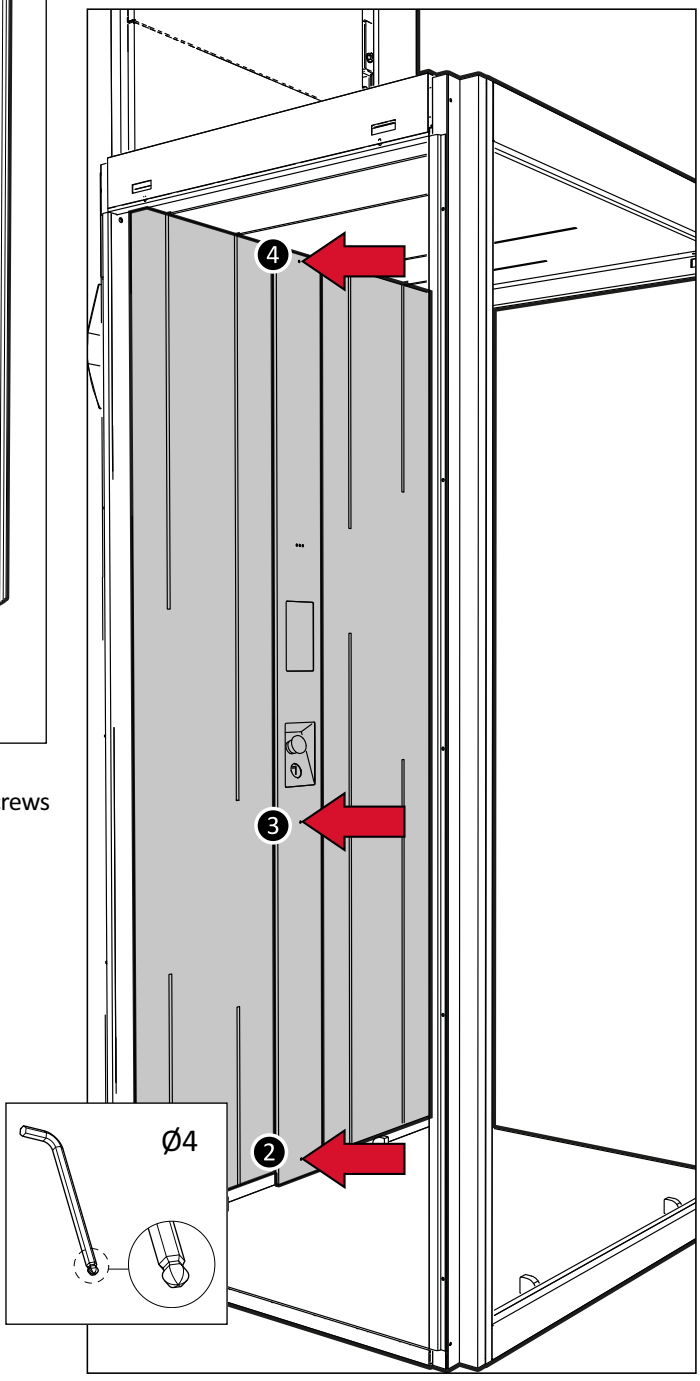


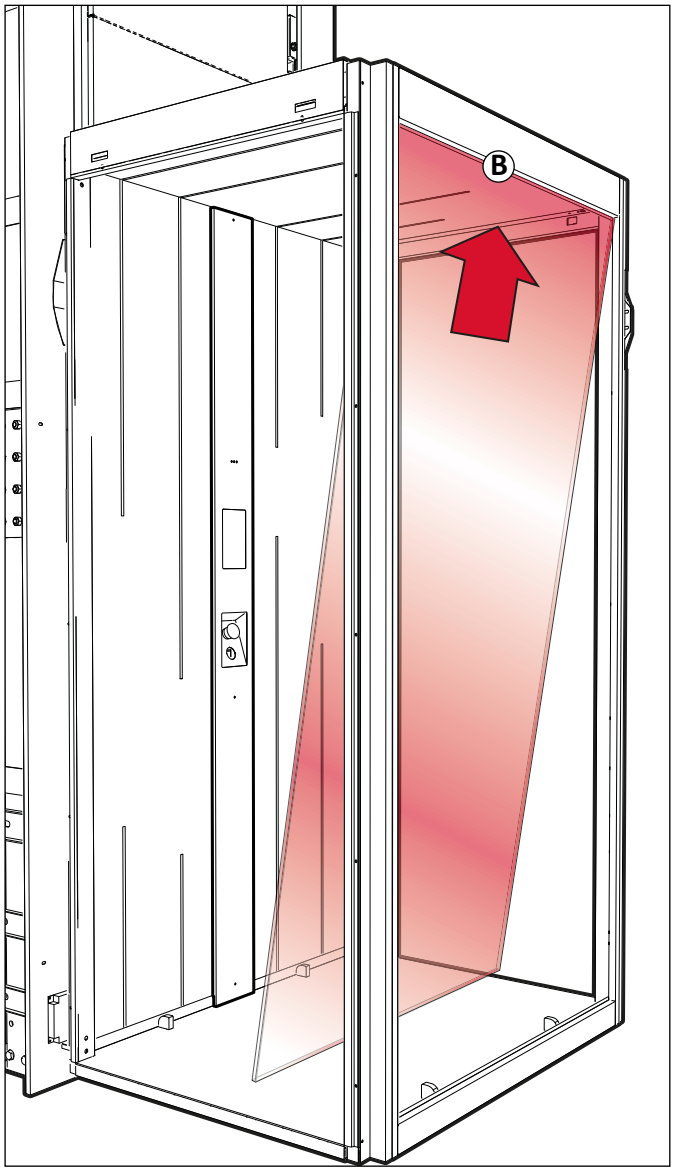
- Secure it with the screws supplied

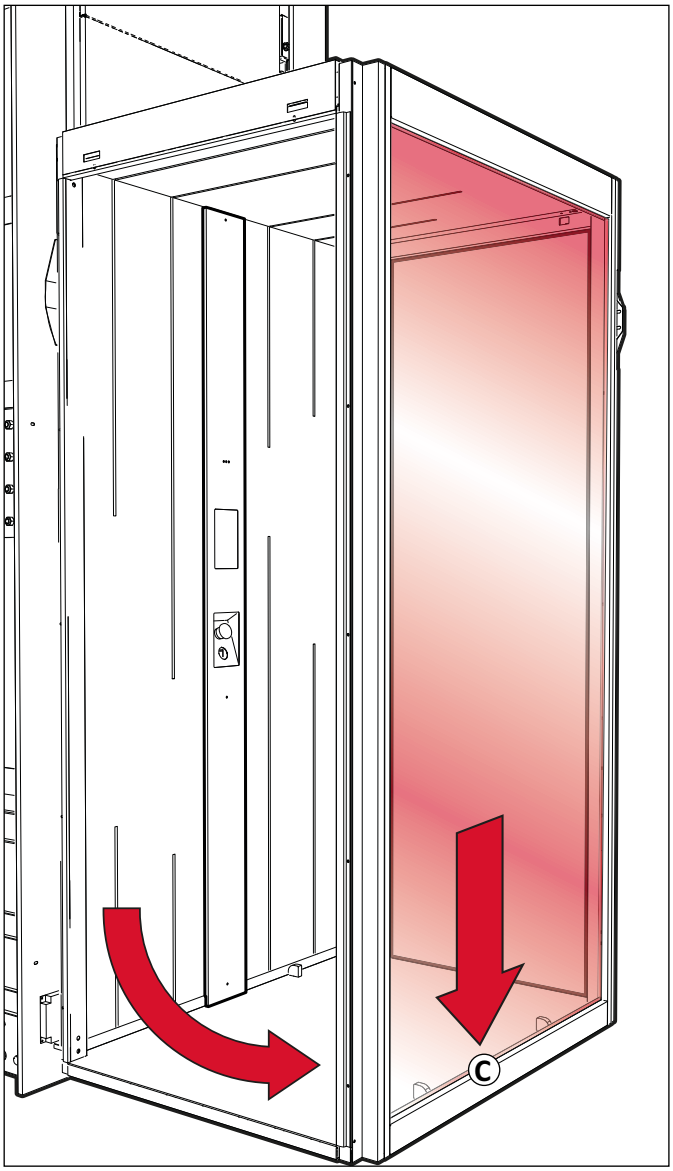


- Fix the push-button panel to the column using the special screws pre-assembled in it.

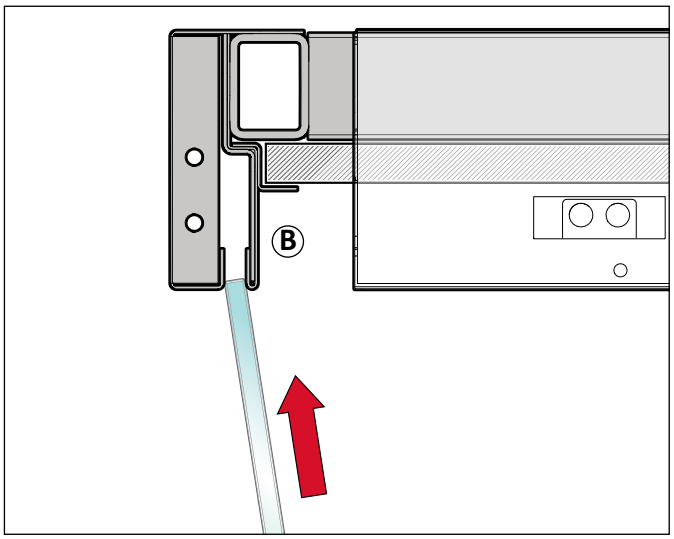
- Position the push-button panel (COP).

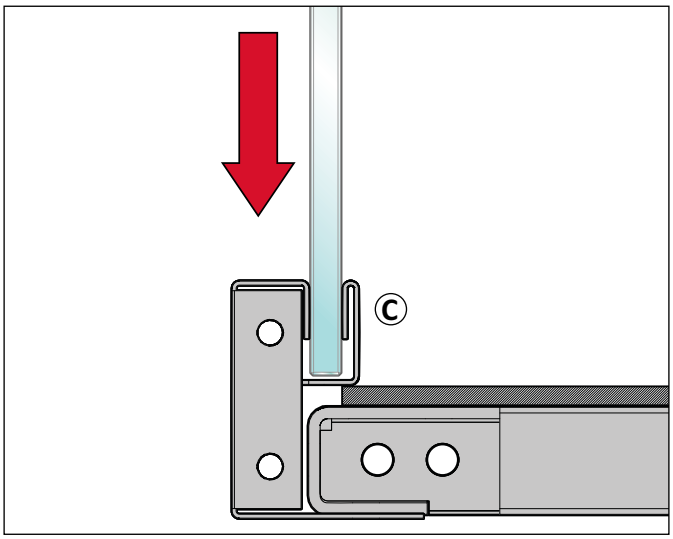


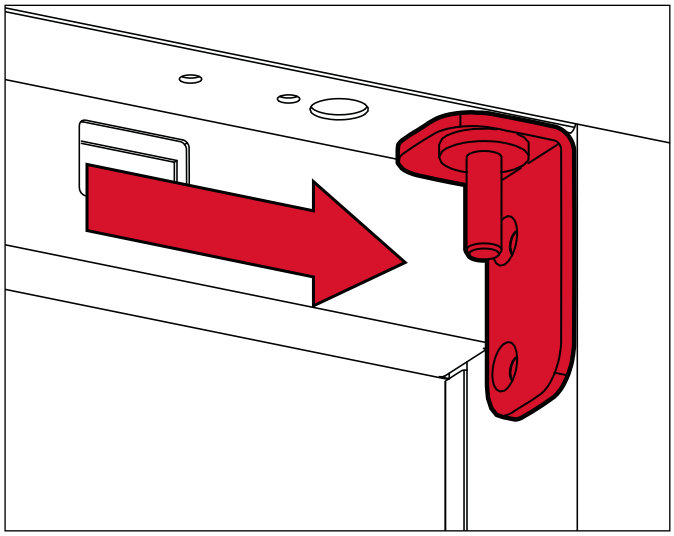


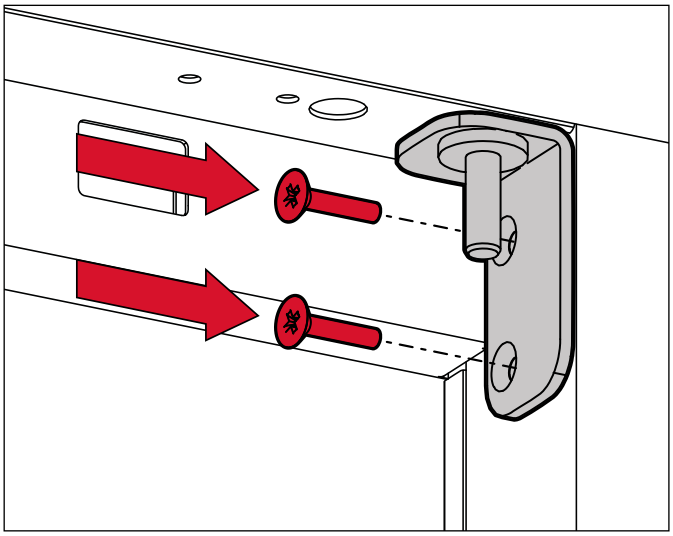


- Insert the glass wall in the special housing (B) of the car ceiling.
- Rotate it downwards and let it place into the glass holder housing (C) of the footboard.

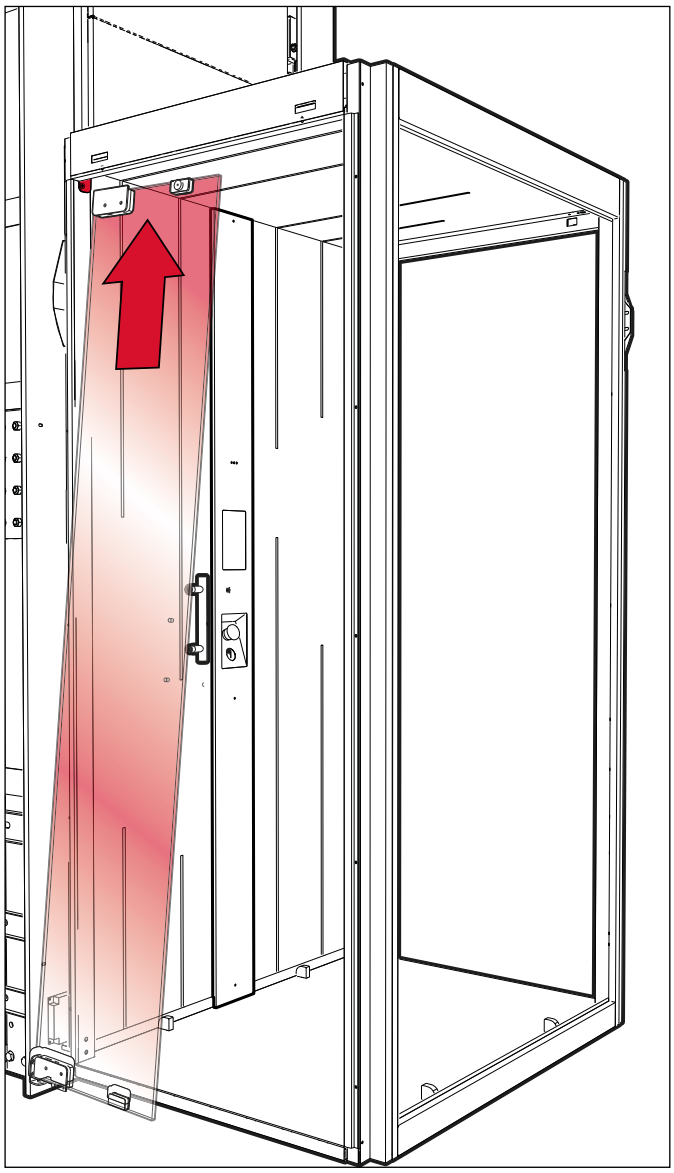




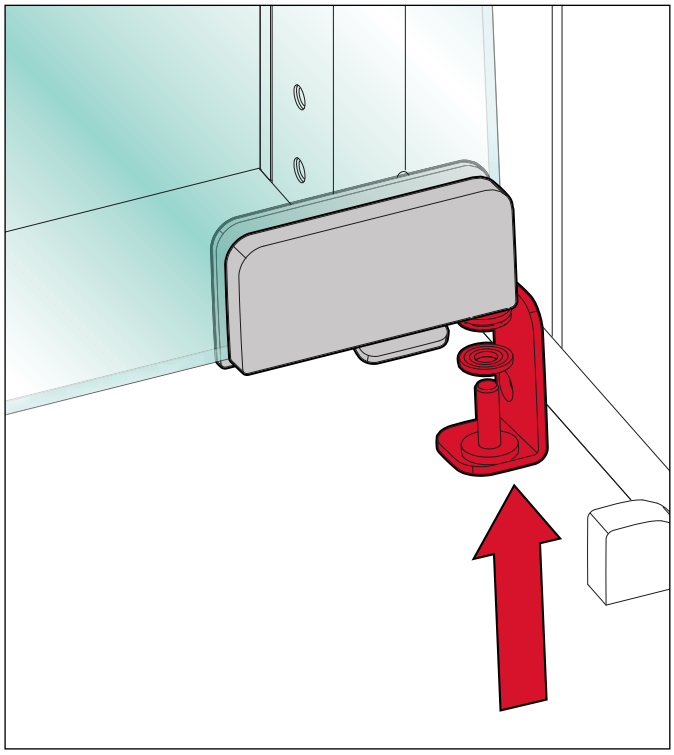


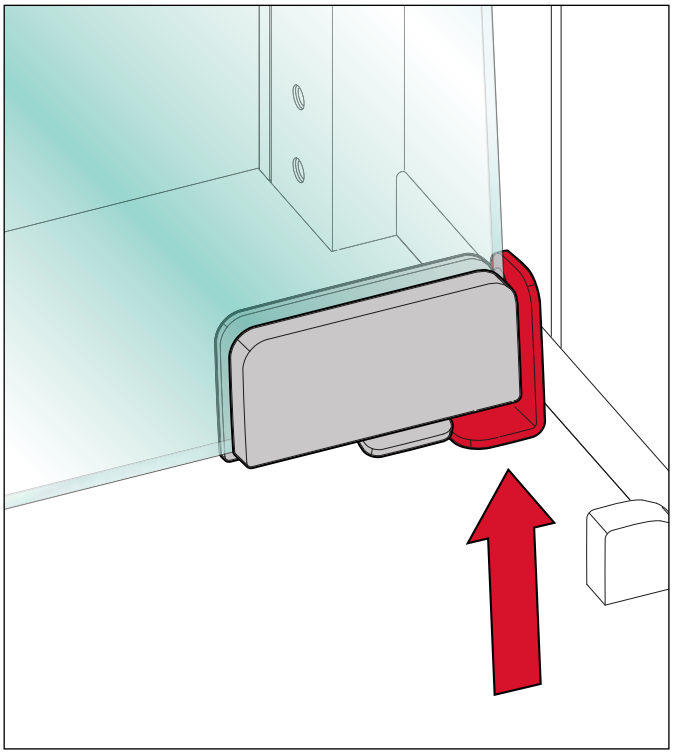


- Install the upper hinges by fixing them with the special countersunk screws supplied

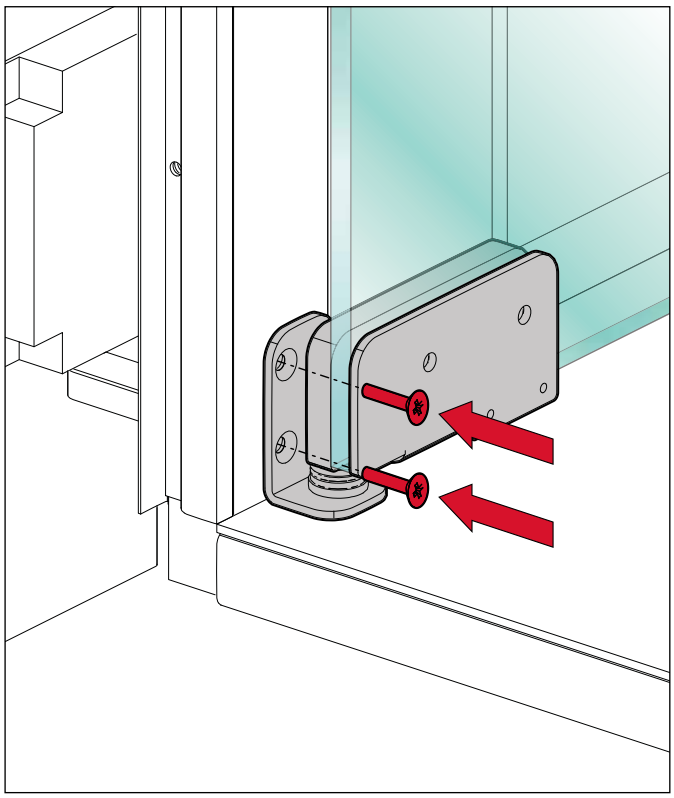


- Insert the glass doors taking care to position the washer





- Insert the hinge with the relative bearings and washers, keeping the door inclined
- Bring the door into position, matching the holes in the hinge with the fixing holes in the door frame.



- Open the door to access the fixing holes.
- Secure the hinge with the supplied screws.

13. LANDING DOORS

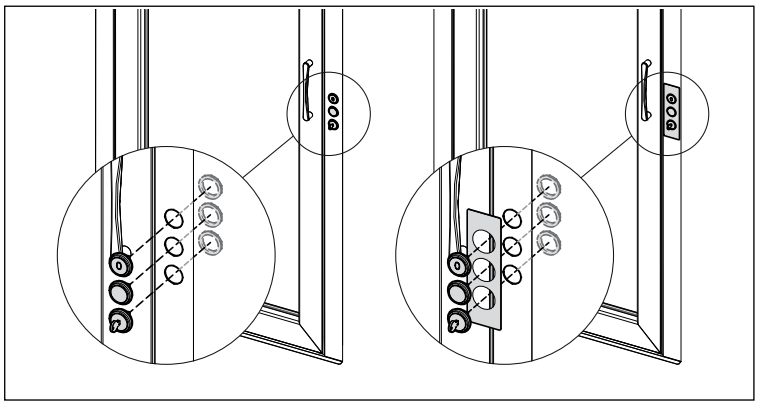
INFORMATION

For the landing doors installation, strictly follow the related installation manuals (supplied in the door package).

14. LANDING OPERATION PANELS

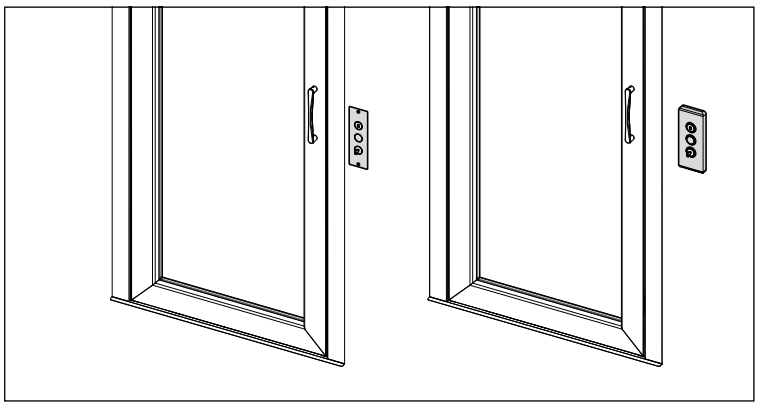
ON-JAMB BUTTONS

- Fix the button to the jamb and proceed with wiring. The plates (if foreseen) are supplied with the buttons.



ON-WALL BUTTONS

- Fix the LOP as advised by the supplier. The instructions are supplied in the package.



15. FIRST TEST RUN

Before making a full run with the car sling, we recommend:

- Cleaning the guides thoroughly and then oil them with suitable oil (e.g. ISO VG-220 EP or higher);
- Visually checking that there are no obstructions or protruding materials along the shaft that could interfere with the car sling and the base.
- Checking that all STOPs are off;
- Checking that the pit protection device is switched off;
- Checking that the distance between the cab and the head is the same as that shown on the project;
- Supplying voltage to the panel controlling it in MAINTENANCE mode.

With the car sling stopped at the top floor:

1. Check that the upper stroke margin of the car sling on the guides corresponds to the project drawing;
2. Record the position of the overtravel contact so that it intervenes after a climb of about 30mm above the floor.
3. Descend with the car sling to the lowest floor;
4. During the stroke, pay close attention to the proper length of the flat cable and any interferences;
5. Record the position of the lower overtravel contact so that it intervenes after a descent of about 30mm beyond the lower floor;
6. Make some full runs, checking:
7. The movement of the flat cables;
8. Any abnormal noises;
9. That there are no obstacles in the way of the contact.

Record the check as per point 2.1 of the "Final Checks" manual.

16. DEFINITIVE ELECTRICAL CONNECTIONS

INFORMATION

For: general instructions, safety regulations, liability and warranty conditions, handling of loads; refer to the manual "**SAFETY INSTRUCTIONS AND SITE MANAGEMENT**".

16.5. MAGNETIC SENSORS FOR SHAFT INFORMATION

- Position the magnets on the guides according to the distances indicated on the wiring diagrams.
- Following the wiring diagram, install the following magnets on the guides
  - magnets for floor stops;
  - system power factor correction magnet.

16.6. CAB CONNECTIONS

- Check the earth connection and record the check as per point 2.16 of the "Final checks" manual".

16.7. OVERRUN SWITCH

- Check that the micro-contact is correctly operated by the fixed shapes mounted on the cab guides.
- Check that when the contact opens, the system stops.

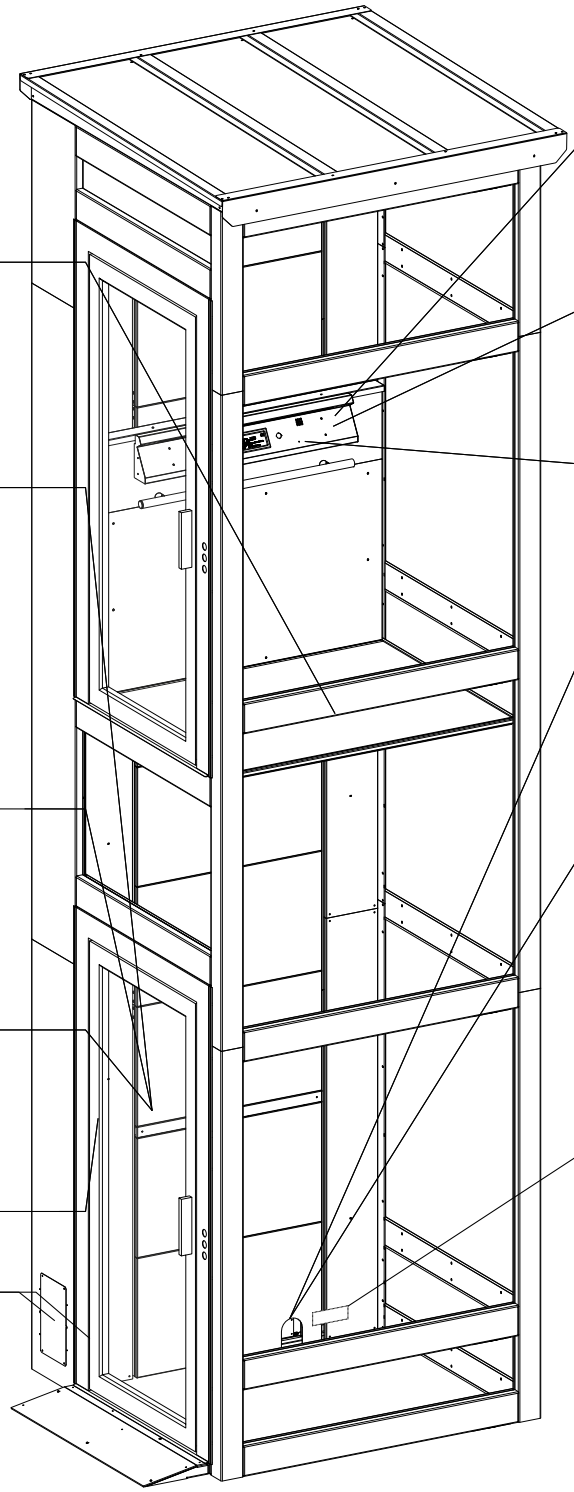
16.8. OPERATING PANEL CONNECTION CHECK AND INSULATION TEST

With the help of the project wiring diagram, check that all the electrical connections have been made on the lift control panel.

Perform insulation tests of the circuits towards earth according to these instructions:

- bring the cab away from the floor, so that the safety chain is closed;
- remove the power supply to the driving force and cab light circuits;
- disconnect the control circuit from the earthing system and any batteries;
- connect an ohmmeter tip (usually the black one) to an external earth (e.g. motor housing, or center of the socket if earthed).
- With the other tip, test all the circuits (driving force, manoeuvring circuit, light signalling circuit, cab light, motor power supply, alarm circuit);
- Disconnect the tip (black) from the external earth and connect it and a terminal of the control circuit and test with all other circuits;
- repeat the operation so that the insulation between all the various circuits is tested exactly.

17. PLATES TO BE ATTACHED TO THE LIFT



Check the presence of the capacity plate (not part of the signs but provided with the pushbutton column)

ON THE PROXIMITY EDGE

LOAD SUPPORT

Inside

ON THE LIFT CONTROLLER CABINET

Outside car (rear COP)

On the cabinet cover

PIT

On the pit protection device

On the mains switch

Readable from the lowest access

Emergency key

Above the housing of the PIT-PROT

Lift Outside alarm

On the SAFE-PIT door

To be applied on the inside of the manual landing doors, lock side.

To be attached to landing doors, in public buildings.

To be attached to landing doors, when the lift is out of service.

18. FINAL TEST AND ADJUSTMENT

INFORMATION

Once the installation is completed, please carry out a final check on the whole lift, in order to guarantee good travel comfort and follow through with the acceptance tests, in accordance with standards (**see point 2 on the "Final tests" manual**).

Only qualified personnel with the relevant skills are allowed to perform the above-mentioned tasks

18.1. GENERAL STEPS

Make sure the lift features match the contract details, the project drawings and the electrical scheme.
In particular:

- tension values in general and for each electrical device;
- duty load;
- speed;
- plate data of motor and gearbox (power, voltage, motor absorption, reduction ration, etc.);
- triggering of motor protection devices;
- landing door levelling;
- difference in height between emtpy car and full car when at stops;
- type and function of landing doors;
- safety chain;
- safety distances;
- electrical insulation towards grounding, between operation circuit and driving force and between operation circuit and lighting.

18.2. MOTOR UNIT

- It is not possible to change the raising speed as this is determined by the maximum torque transmitted by the motor and by the reduction ratio achieved by the pulleys.
- The geared motor selected at the design stage allows for a maximum speed of 0.15 m/s.
- This value should be checked during the final test (**see paragraph 2.5 of the manual "Final checks"**).

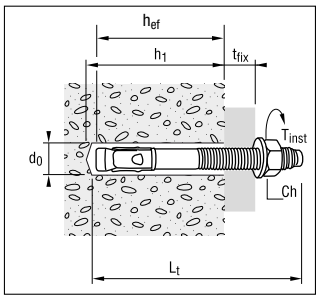
19. NOISE LEVEL

- The sources of noise are the motor, the brake and sliding of the shoes on the guide rails, especially during the lifting phase with full load (including maximum allowable overload).
- The motor is positioned in the rear part of the sling between the guide rails and behind the protection casing.
- The operator will stand inside the car and therefore will not be directly subject to the sound emissions of the sources of noise. Nonetheless, as a precautionary measure the measurements were made directly around the above mentioned sources, in an industrial environemnt with no other machines in operation.
- In the different configurations considered, all the sound pressure levels measured were below 70dB(A).

A1. ANCHORAGE TO THE SHAFT WITH MECHANICAL OR CHEMICAL ANCHOR

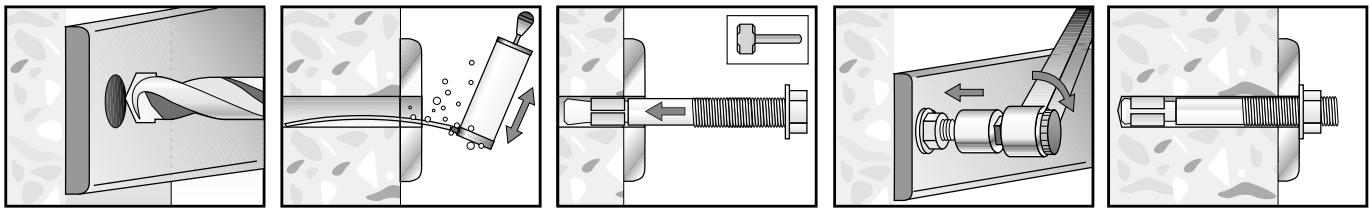
A1.1 CONCRETE SHAFT

Unless otherwise specified, all anchoring plugs are M10 in size and require a hole made in the wall with a 10 mm bit



h_1	=	Minimum hole depth
L_t	=	Dowel length
d_0	=	Hole diameter
t_{fix}	=	Fixable thickness
t_{inst}	=	Tightening torque
Ch	=	Wrench
h_{ef}	=	Depth of anchorage

ASSEMBLY SEQUENCE



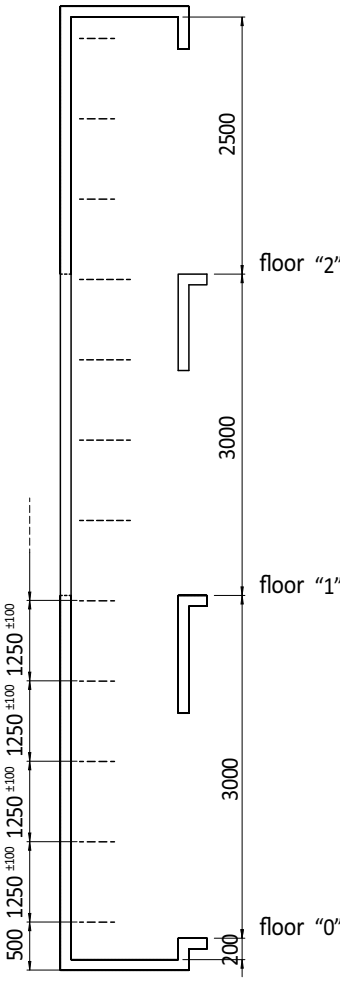
A1.2 LOAD-BEARING MASONRY SHAFT

INFORMATION

In order to anchor the uprights in the masonry shaft (**made with materials suitable for construction of load-bearing/structural***), the distance between clamps must be reduced to cope with the lower mechanical resistance of the shaft wall.

*** Construction materials suitable for the realization of load-bearing walls even in seismic areas, calculated and built in compliance with the relevant legislation in the places of installation (IT - Technical Regulations for Construction: D.M. 14.01.0, NTC2018 etc.).**

The fixing brackets gap is 1250 mm, starting from the pit bottom = 500 mm.



INFORMATION

Always refer to the **project drawing** for installation.

NOTICE

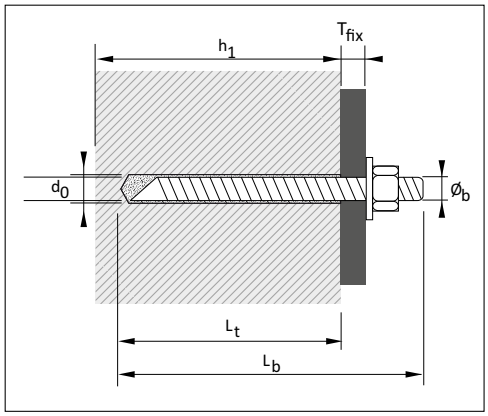
For all cases not covered by the described types, an inspection and a project by a qualified technician are requested.

A1.2.1 ANCHORAGE in a LOAD-BEARING MASONRY SHAFT WITH SOLID AND COMPACT ELEMENTS

The special kit F350.23.0026V01 for chemical bolts application is composed of:

- n° 16 zinc plated THREADED RODS 45° cut (anti rotation) (M10x130 GALVANISHED CHEMSET STUD);
- n° 2 pcs 300 ml CARTRIDGES of ANCHORING ADHESIVE*, to be used with standard caulking guns (skeleton gun);
- n° 2 multipurpose MIXERS ø9 mm, additionally to the 4 mixers foreseen for the cartridges.

Each kit is sufficient for 8 brackets, required for approx. 1 stop.
For instance, 3 F350.23.0026V01 kits are required for a 3 stops' lift, the brackets being positioned as per the sample drawing.

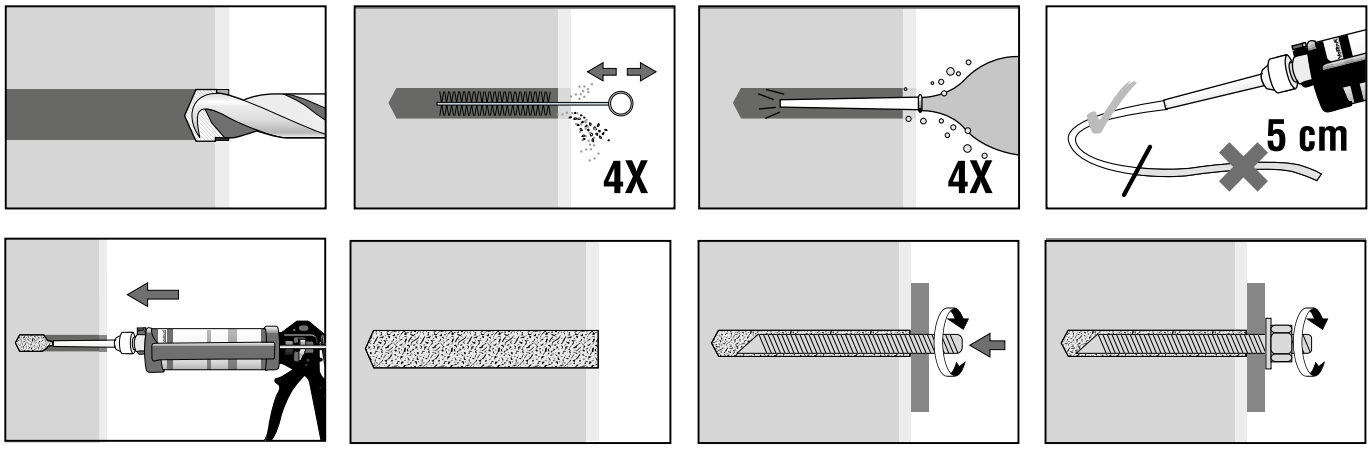


h_1	=	Minimum hole depth
L_b	=	Rods length
L_t	=	Dowel length
d_0	=	Hole diameter
$Ø_b$	=	Rods diameter
T_{fix}	=	Fixable thickness

Threaded rods length calculation:

$L_b = L_t + T_{fix}$

ASSEMBLY SEQUENCE



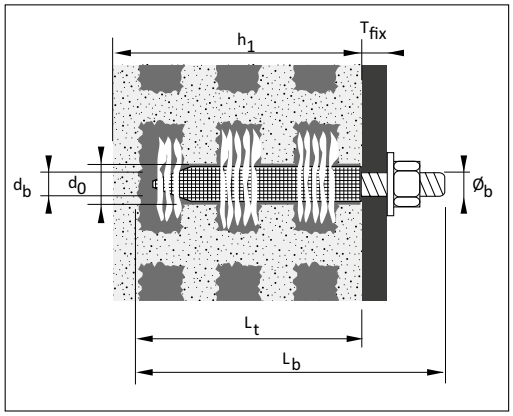
Carefully clean the hole before installation.

A1.2.2 ANCHORAGE in a LOAD-BEARING MASONRY SHAFT WITH HOLLOW ELEMENTS

The special kit F350.23.0025V01 for chemical bolts application is composed of:

- n° 16 zinc plated THREADED RODS 45° cut (anti rotation) (M10x130 GALVANISHED CHEMSET STUD);
- n° 2 pcs 300 ml CARTRIDGES of ANCHORING ADHESIVE*, to be used with standard caulking guns (skeleton gun);
- n° 2 multipurpose MIXERS ø9 mm, additionally to the 4 mixers foreseen for the cartridges;
- n° 2 FINE METAL MESH SLEEVE ø16 mm, length 1 mt each.

Each kit is sufficient for 8 brackets, required for approx. 1 stop.
For instance, 3 F350.23.0025V01 kitskits are required for a 3 stops' lift, the brackets being positioned as per the sample drawing.

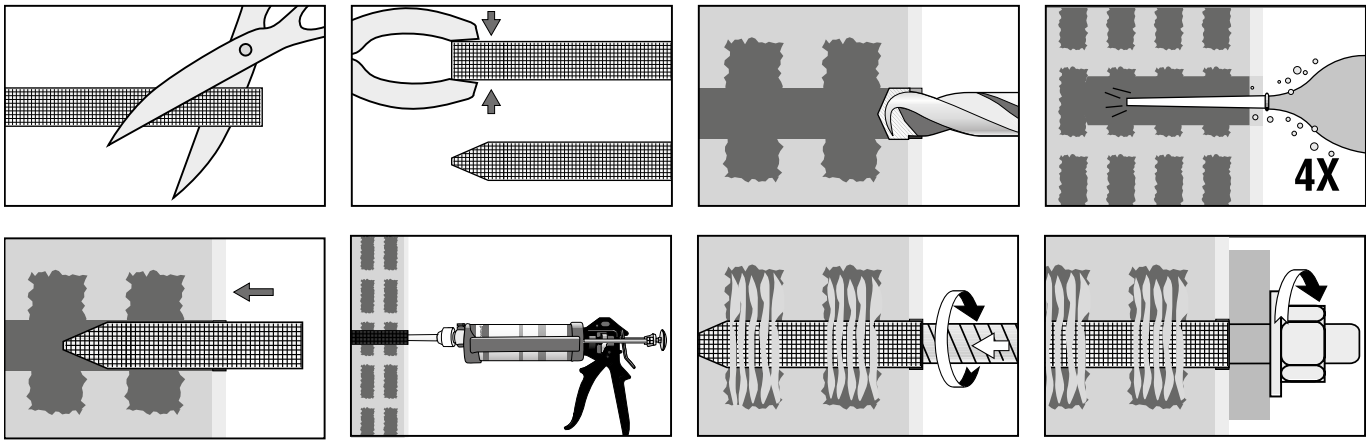


h_1	=	Minimum hole depth
L_b	=	Rods length
L_t	=	Dowel length
d_0	=	Hole diameter
d_b	=	Metal Mesh Sleeve diameter
$Ø_b$	=	Rods diameter
T_{fix}	=	Fixable thickness

Threaded rods length calculation:

$L_b = L_t + T_{fix}$

ASSEMBLY SEQUENCE



Carefully clean the hole before installation.

NOTE:

* Valid for elements in: concrete, natural stone, solid and hollow brick.