

User Manual

Metacon-Next SGC EI(1) 60 / EW 120



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This is a manual translated into English

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1 Preface

Before using the door, please observe the safety instructions in this document and the instructions for use.

Metacon-Next only supplies products to the "specialist retailers". This means that Metacon-Next only delivers a door. The installation, service and maintenance by and under the responsibility of the "specialist retailer" is taken care of.

Metacon-Next only supplies CE marked doors in accordance with EN 13241 and/or EN 16034.

If assembly and installation of the fire resistant door is done by third parties and changes are made to the door by the installation company, this shall be done with material supplied by Metacon-Next, registered under the serial number of the door.

When the installation company makes this modification in accordance with the current European legislation, it is obliged to mark the installation CE itself.

It is the responsibility of the installation company to install the door in accordance with the operating instructions. The operating instructions should remain with the door at all times.

Type marking with the serial number is attached at the following location: On the drive side on the guide, approximately 1600mm from the bottom. This sticker must not be removed or covered, this information is required for the supply of repair and/or maintenance items, among other things.

Metacon-Next shall not be liable for unsafe conditions, accidents, damages and injuries resulting from, for example:

- Disregarding warnings and/or regulations as displayed on the fire resistant door and/or in the owner's manual;
- Insufficient and/or improper maintenance, Metacon-Next sets a minimum frequency of once a year maintenance as necessary;
- Modifications to the door and accessories by third parties. This also includes the use of other than prescribed replacement parts (e.g. a battery), incorrect connection or setting, modification of the control unit and control program.
- Improper installation or assembly of the product.
- Local (country specific) additional regulations.

Reference documents:

- EN 13241-1; EN 16034;
- Terms and Conditions of the Metaalunie;
- Installation Drawing Metacon-Next;
- Package receipt with item numbers;
- User manuals from the motor and controller supplier;
- User manuals of any included accessories;
- DoP (Declaration Of Performance).

The installation company must follow all instructions in the installation instructions. The user must follow all instructions in the user manual. The user manual should be handed over to the user upon completion to be left at the door.

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2 Introduction

This fire resistant door is mainly intended to separate interconnected spaces (fire compartments) in case of fire and/or smoke development. The purpose of this is to prevent the fire from spreading to other rooms and/or adjacent properties. The fire resistant door can be controlled by a fire alarm system but can also be controlled by a stand-alone alarm system.

The CE marking that is issued is only valid for those performances that are stated in the Declaration Of Performance (DoP), which is supplied with each door.

In accordance with the EN 12635 standard, in this document, after the instructions for use, the installation instructions and regulations for first use will follow.

3 Safety

When installing the fire resistant door, the (safety) regulations applicable to the situation must be observed, for example, the Working Conditions Act. In addition to the regulations, the instructions in this document must be strictly followed. When installing electrical components, the instructions supplied by the manufacturer of these components must be observed.

Since Metacon-Next is only a manufacturer/supplier of "semi-finished products," it is the responsibility of the installation company to ensure that they work in accordance with the relevant instructions and regulations.

Any damage or injury incurred as a result of non-compliance with this user manual, maintenance instructions and improper use cannot be recovered from the fire resistant door manufacturer.

3.1 Safety Features

The installation may be equipped with the following safety devices.

- Roll-off / fall protection / slack cable protection / crushing protection / switching protection.
- Smoke and temperature detectors and/or fire alarm system.
- Shielding below 2500 [mm] from an accessible floor, mandatory in case of a crushing hazard (NEN-EN 294);
- ATEX components, if applicable, see additional manual/instruction

See the product specifications in Chapter 5 for installed features.

3.2 Safety guidelines

- The fire resistant door may only be operated by persons who have taken note of the operating instructions. Under no circumstances may the door be operated by children or persons with reduced physical, sensory or mental capacity. The door may only be used in the manner described in section 4.1.
- The fire resistant door is designed so that the door will always close mechanically failsafe in the event of a fire or smoke alarm. During mechanical failsafe the door will not signal persons and/or materials, in accordance with EN 13241 an optical and acoustic warning signal will be activated. (Exceptions to this rule are possible in consultation with or after approval by the competent authority, the installation company or end user must arrange for this approval to be granted).
- In exceptional situations, the fire resistant door can be supplied with a non-mechanical failsafe system, this door should be closed at all times, it can be used as a passage but should then immediately close again.
- When the door is installed in an escape route ensure that the door is suitable for intended use (escape door). (EN 16034-2) (EN 14351-1 and 2)
- In the case of hold-to-open/hold-to-close operation, the control switch must be positioned so that the operator has a clear view of the opening/closing of the door.
- Before operating, check that there is no visible damage to the door, if damage is found the supplier should be asked to repair the damage, a door with damage should not be operated.
- Before and during operation, check that there are no other persons within an area of ± 2 [m] of the door.
- Before and during operation, check that there are no obstacles under the door.
- During maintenance/inspection of the fire resistant door the installation must be powered down and ensure that it remains powered down.
- Prevent entrapment of persons in the room. If persons are still present, the door should remain open if there is no means of escape.
- When using a mechanical failsafe motor, the door will close immediately upon power failure unless a backup system is present, it will hold the door open until a fire alarm is activated or after the critical voltage of the backup system is reached.
- We recommend that the installation be grounded, with an ATEX version this is mandatory.

3.3 Residual risks

In case of regular use:

- Entrapment can occur when the fire resistant door closes upon fire alarm. The mechanical failsafe closing of the fire resistant door does not take into account the possible presence of persons. The probability of a person becoming trapped is very low due to the low speed of the closing movement and the optical and acoustic warning signals.
- When a gravitational self-closing (failsafe) system on our products / the fire resistant doors, 2 optical and 1 acoustic signals with autonomous power supplies will be provided in accordance with standard EN 12604-2000 / EN 13241-2016;

It is strictly forbidden to place goods/materials in the "run" of the closing and/or opening door leaf.

In case of maintenance:

- During maintenance/inspection of the fire resistant door the installation must be disconnected from the power supply and ensure that it remains disconnected from the power supply. Due to voltages in the installation there remains a risk of electric shock.
- Upon inspection of the movement system, crushing hazard may occur when the door comes/is in motion.

Property of Metacon-Next B.V.

4 Usage instructions

4.1 Normal use (not during fire alarm/calamity)

Before and during the operation of the door, the following steps should be observed;

- Before you operate the door, you should take note of the safety instructions in Chapter 3.
- Check that there is nothing or no one around, against or under the door while operating the door, do not start or stop operating the door immediately if there is.
- You operate the door by means of the control device, usually push buttons or a key switch. While operating the door, you stay at a sufficient distance but within sight of the moving part of the door, 2-8 mtr.
- Make sure that while operating the door, it actually moves in the correct direction, if it does not, stop operating and/or press the stop button and contact the supplier immediately.
- Keep a view of the door at all times during movement.
- Make sure the door is fully opened when opening and fully closed when closing to promote durability.
- If irregularities are detected while operating the door, stop operating and contact the supplier. Possibly an unsafe situation arises, cordon off the area so that the passageway cannot be used, e.g., if the door is not fully opened or closed.

The door can be protected against entrapment of objects and/or persons in several ways.

NOTE: Holding the control will override the protection.

- In the case of hold-to-open/hold-to-close operation, the door will stop immediately after releasing the control.
- If an safety edge protection function is present, the door will automatically go back up after contact with an object and/or a person. Possibly a set of photocells can be added to the safety edge protection function.
- When a set of photocell curtains is installed, the door will not close when the sensor detects an object in the path of this security. Please note that this only works in the line/area of the security sensor. No object and/or person will be detected outside of this.

Note that safety devices are not designed to operate the door!

In order to put the door back into operation after a safety edge/ photocell curtains has been triggered, you must remove the objects and/or persons from the detection area of the safety edges.

4.2 Self-closing function

If the door is in the open position at the moment of "activation" by an (automated) alarm system and mains power failure, it will close automatically. This is done by means of an electric drive with a gravitational failsafe system.

A gravitational failsafe system means that the door can still close by gravity after the failure/loss/breakdown of the electrical facilities. This movement is controlled by a speed limiter. In case of "control" the door will not take into account objects/people under the door and will close immediately.

Optionally, the photocell curtains can be kept temporarily active and closed after a set time with a force lock.

It is strictly forbidden to place goods/materials in the "run" of the closing and/or opening door leaf.

4.3 Actions after improper use

If an object has become trapped under the door, and the door has come to a stop as a result, perform the following actions.

- Move the door up carefully, until you can remove the object.
- After the object is removed, you must close the door completely.
- Perform a visual inspection before sending the door open.
- If in doubt or if any of these actions fail, contact the supplier.

5 Technical Specifications

Please refer to the order confirmation and/or packing slip.

6 Product

Please refer to the product leaflet and the optional BOM (Bill Of Material)

7 Installation preparation

Before the installation of the door can be started, the following items should be checked:

- Before the installation can begin, the installation company must have familiarized themselves with the contents of this user manual.
- It is the responsibility of the installation company to be aware of the local regulations concerning the installation of the door (e.g. Working Conditions Act).
- Check the work area for accessibility and work space, then cordon off the work area.

Note the following points:

- Check the clear width and height and the available side and top space, the dimensions according to Technical Drawing are leading.
 - Check the mounting surface for obstructions.
 - Check that the surface is level for installation as indicated on the technical drawing.
 - Check that the walls, floor and lintel are perpendicular and straight as shown on the technical drawing.
 - Check that the correct electrical connections are present as shown on the technical drawing.
 - Assess whether the substrate offers sufficient strength for the construction, if in doubt contact the supplier.
- Check all parts against the packing slip and/or order confirmation, and/or refer to the list of all parts against the optional BOM (Bill Of Material) of the user manual.

7.1 Essential tools for installation

The required tools cannot be determined by Metacon-Next, as this depends on the installation situation. It is up to the supplier and/or installation company to determine the appropriate tools.

8 Installation Instructions

After the installation company has been prepared according to chapter 7, the installation of the door can begin.

Important: Fasteners are optionally provided by Metacon-Next. Use only fasteners suitable for the intended strength and fire resistance and appropriate to the substrate. Follow the instructions of the fasteners supplied.



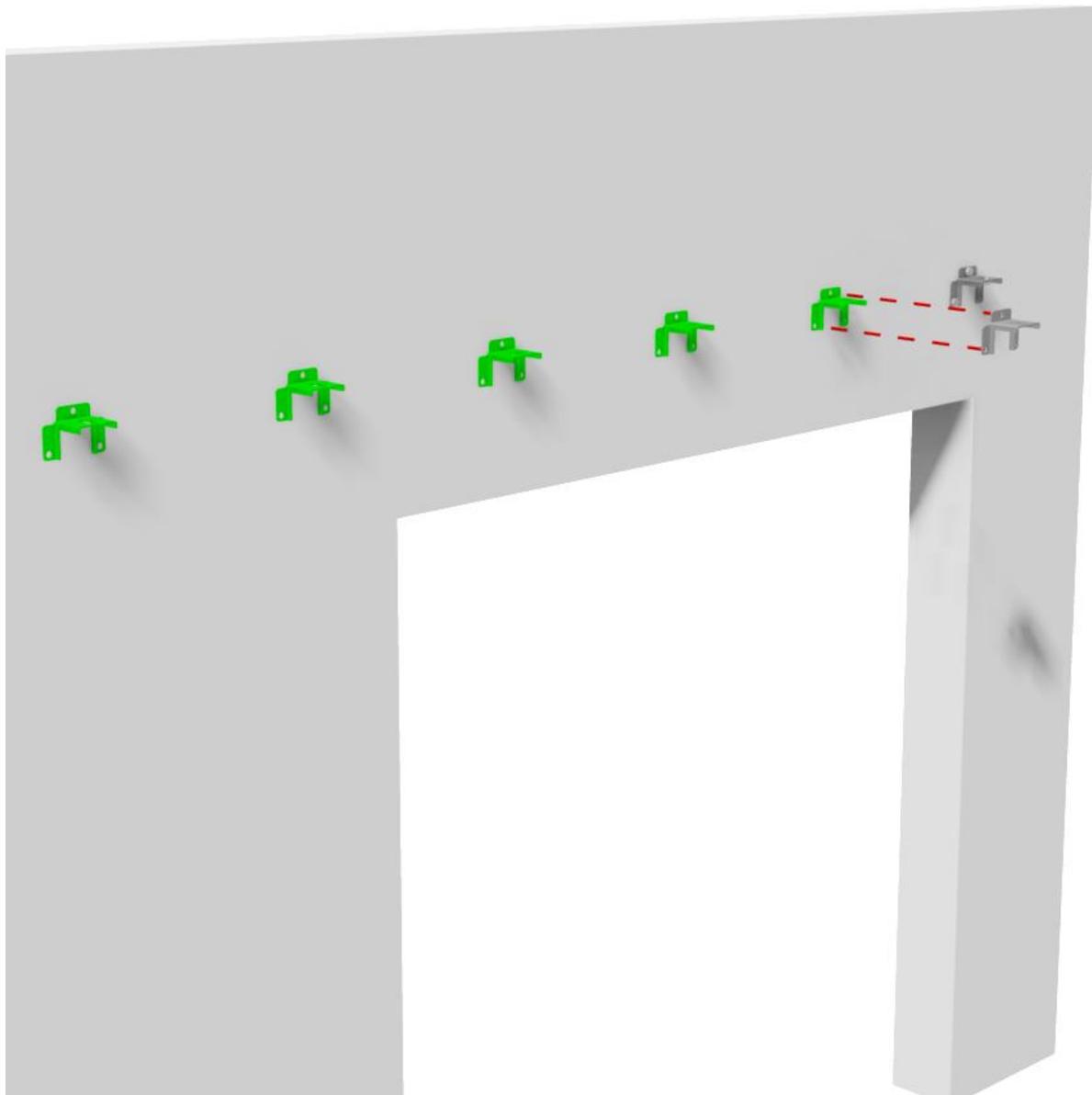
Property

Step 1 - Check if floor has a level surface

Determine the level by finding the highest point of the floor, check that the floor slant does not exceed 20mm in height between its highest and lowest point. If this is the case you cannot proceed with the installation of this door.

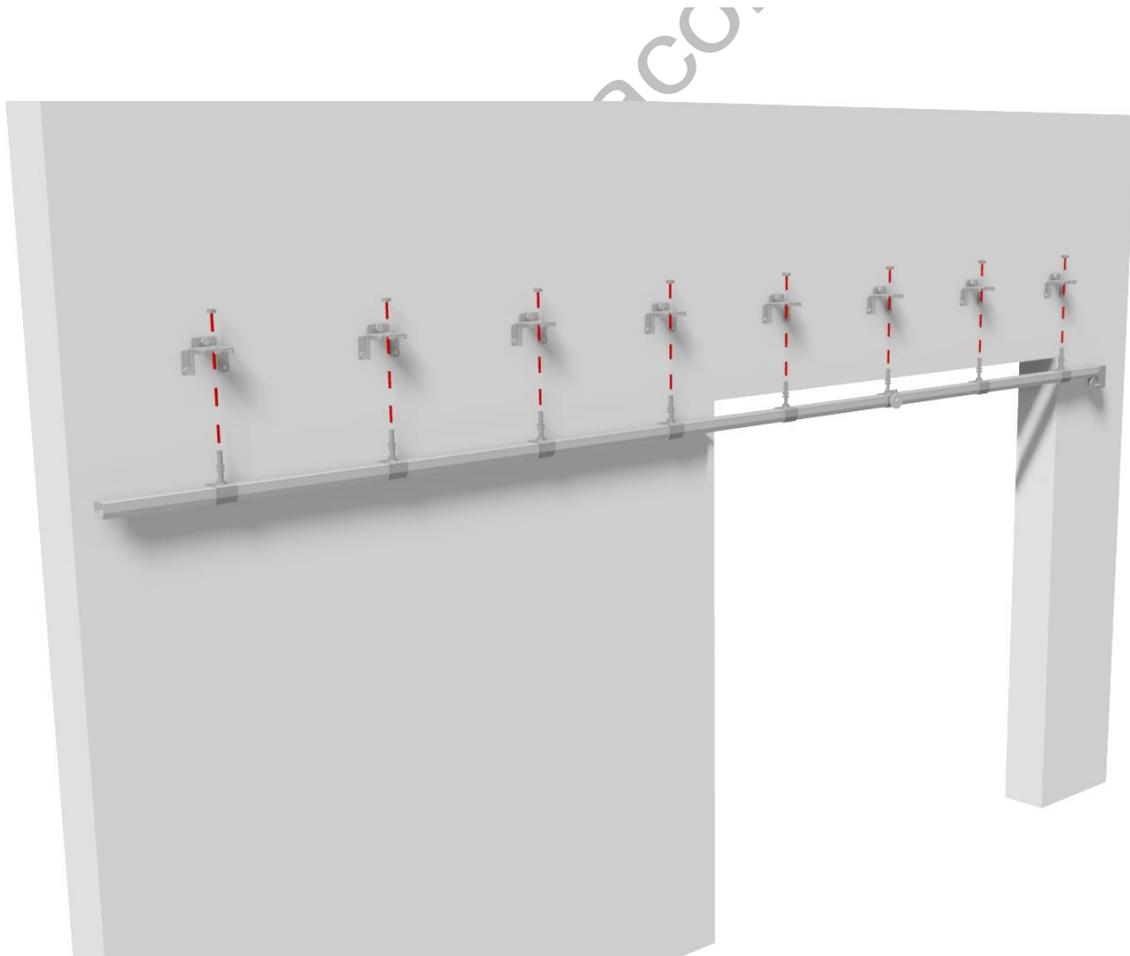
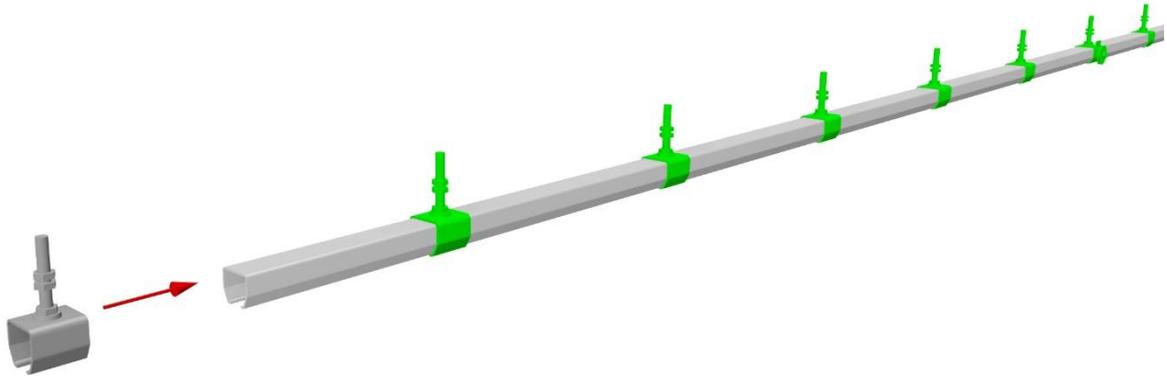
Step 2 - Mount wall brackets

Determine the correct mounting height on the basis of the drawing provided and mount the wall brackets level. Install the first bracket on the closing side according to the drawing provided and space the other brackets as shown on the same drawing.



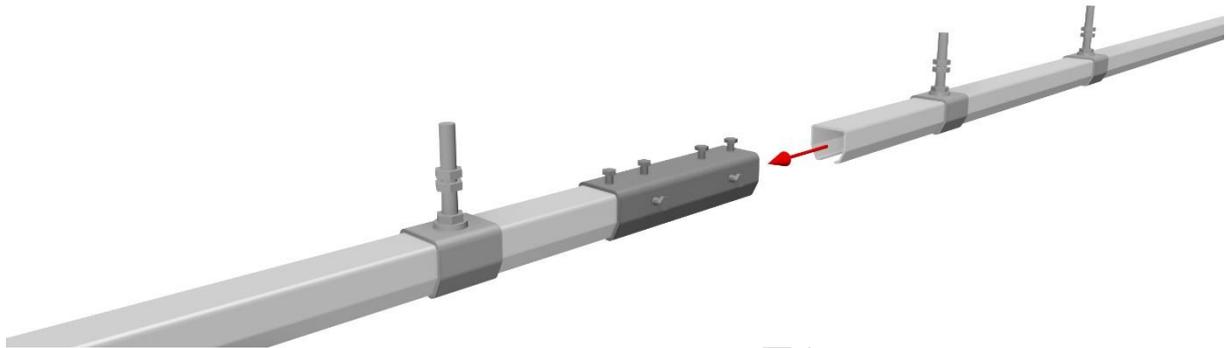
Step 3a: Install rail and rail brackets

Slide the rail brackets over the rails, install the rail brackets with the return pulley at a minimum distance of 1000mm and a maximum distance of 2000mm from the aperture on the non-closing side towards the closing side. Then lift the whole construction and install the rail brackets on the wall brackets.



Step 3b Connect rails

If the rail consists of several parts, start installing on the closing side and continue until the complete rail system is installed. Connect the rails with the supplied connection profiles. Secure the rail by fitting the 2 first and 2 last rail brackets with M8 bolts.

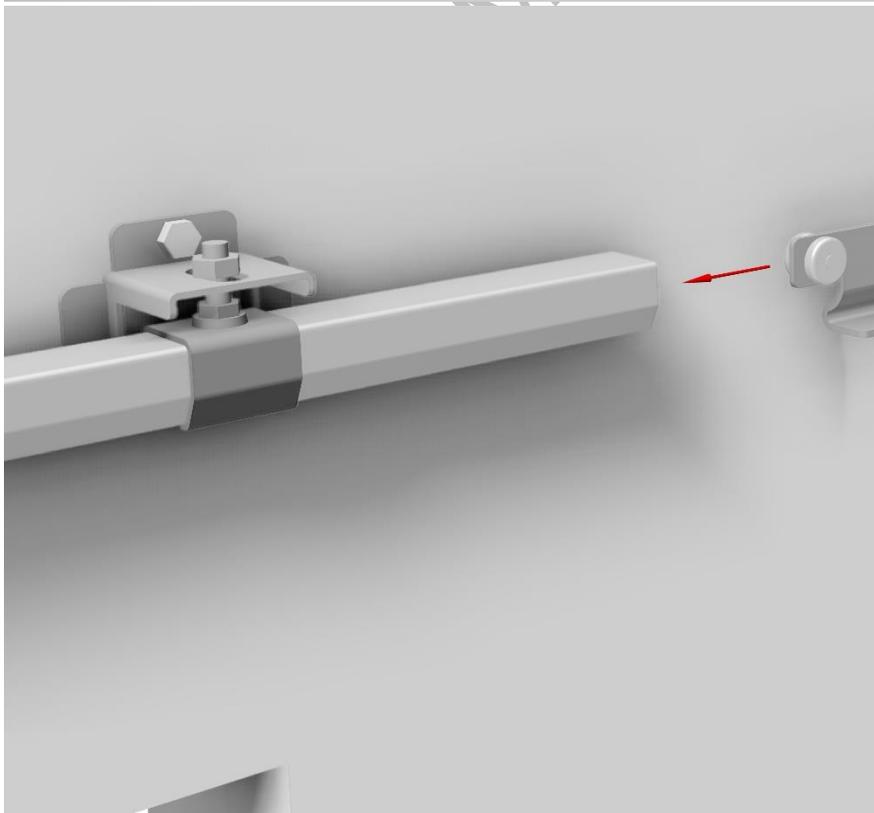
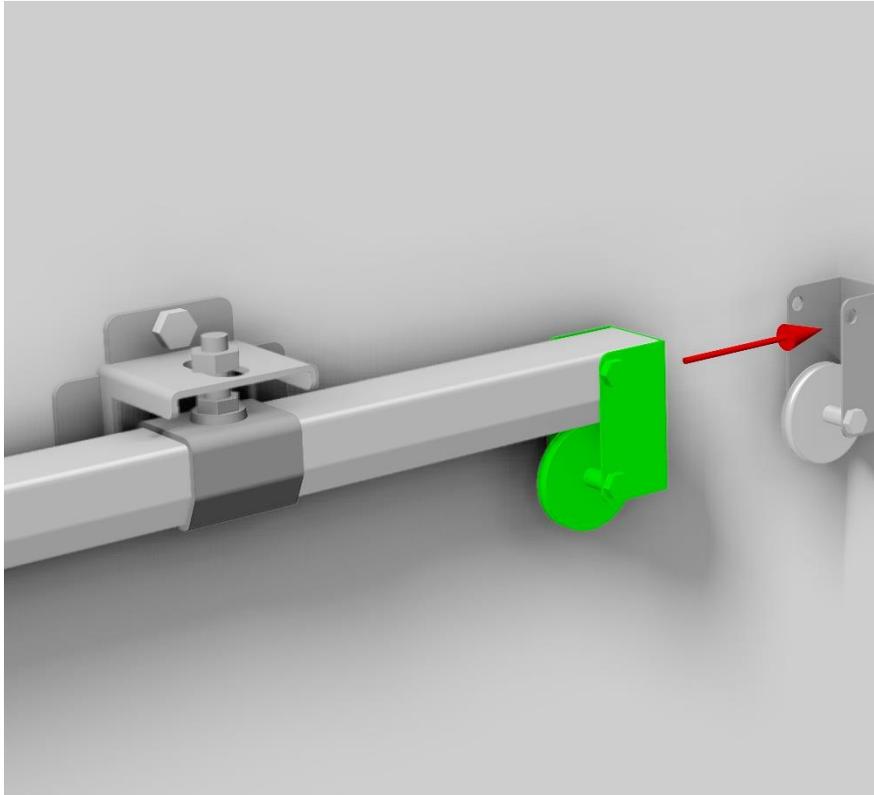


!!Check the alignment and level of the entire section and make sure that all wheels carry the door leaf over the entire length!!

Property of Metacon

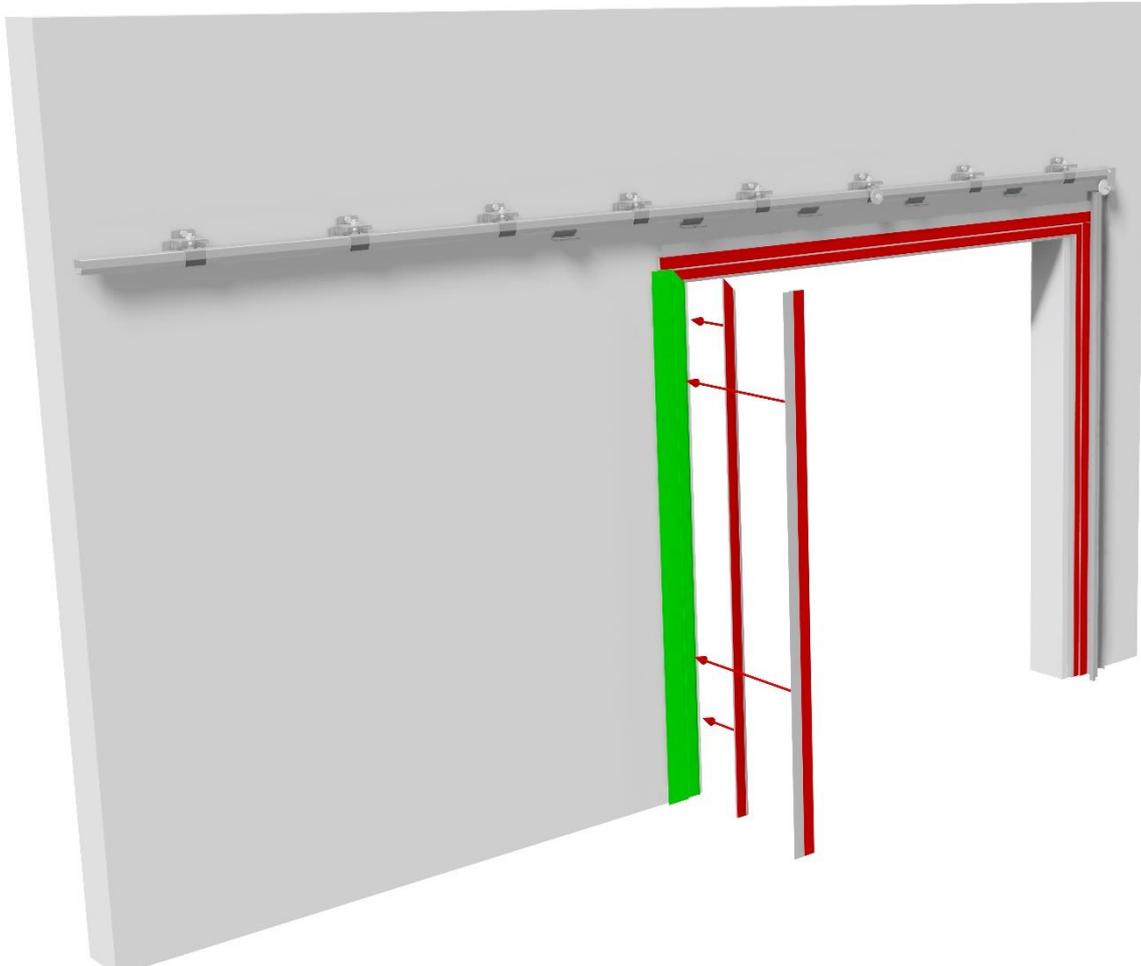
Step 4 Mount end stop and running wheels

Temporarily dismantle the bracket of the return pulley on the closing side. Slide the end stop and then the running wheels (slot at the front) into the rails. Place the bracket of the return pulley back into the rail.



Step 4 - Mount labyrinths

Mount the horizontal labyrinths (2x) and vertical labyrinths (4x) flat and level according to the supplied installation drawing (keep 2mm distance between a set of labyrinths) and then check whether they are level.

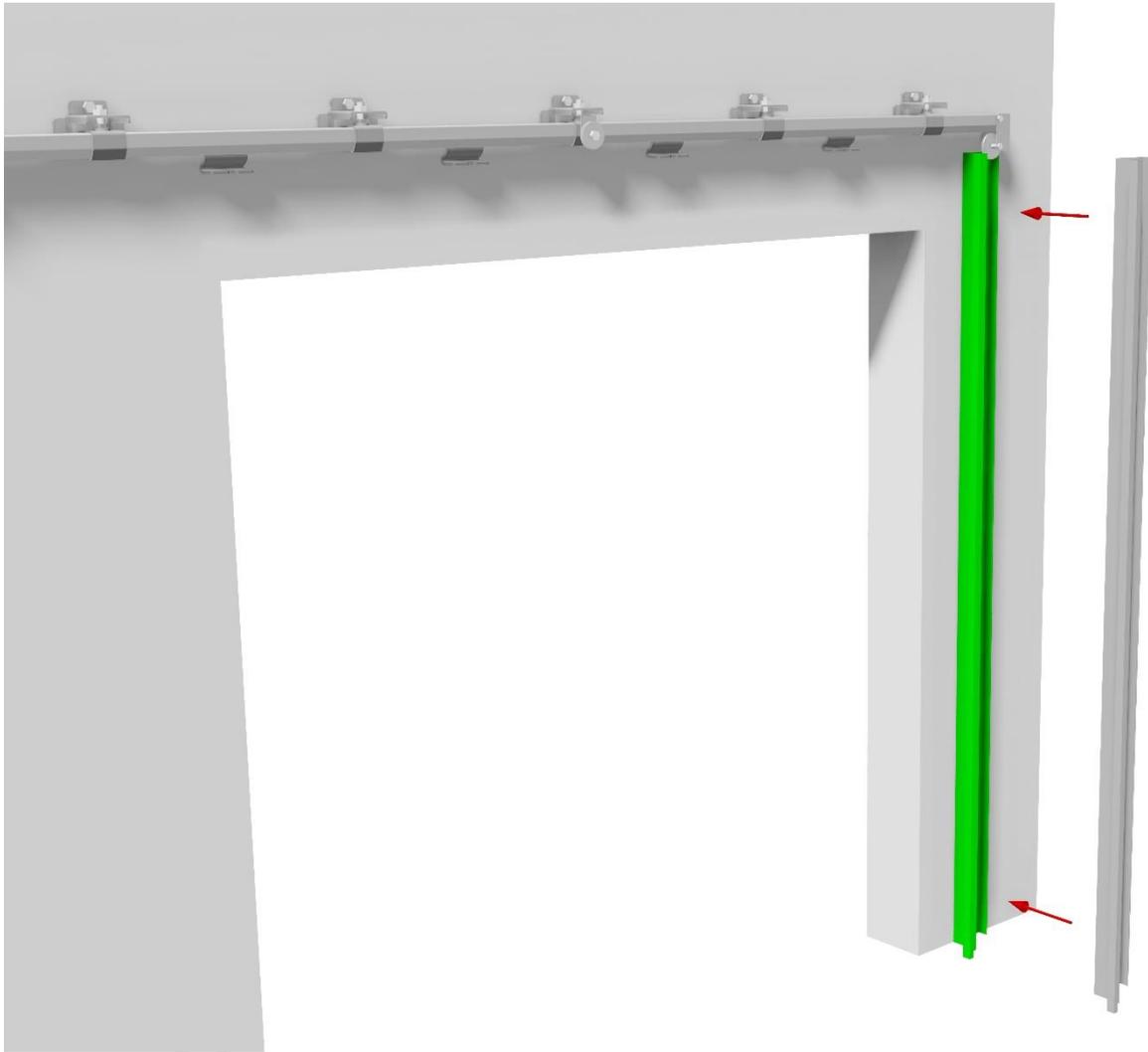


Property

Step 5 - Mount the weight shaft (wall side part)

Mount the wall side part of the weight shaft on the closing side vertically and straight on the aperture according to the drawing provided.

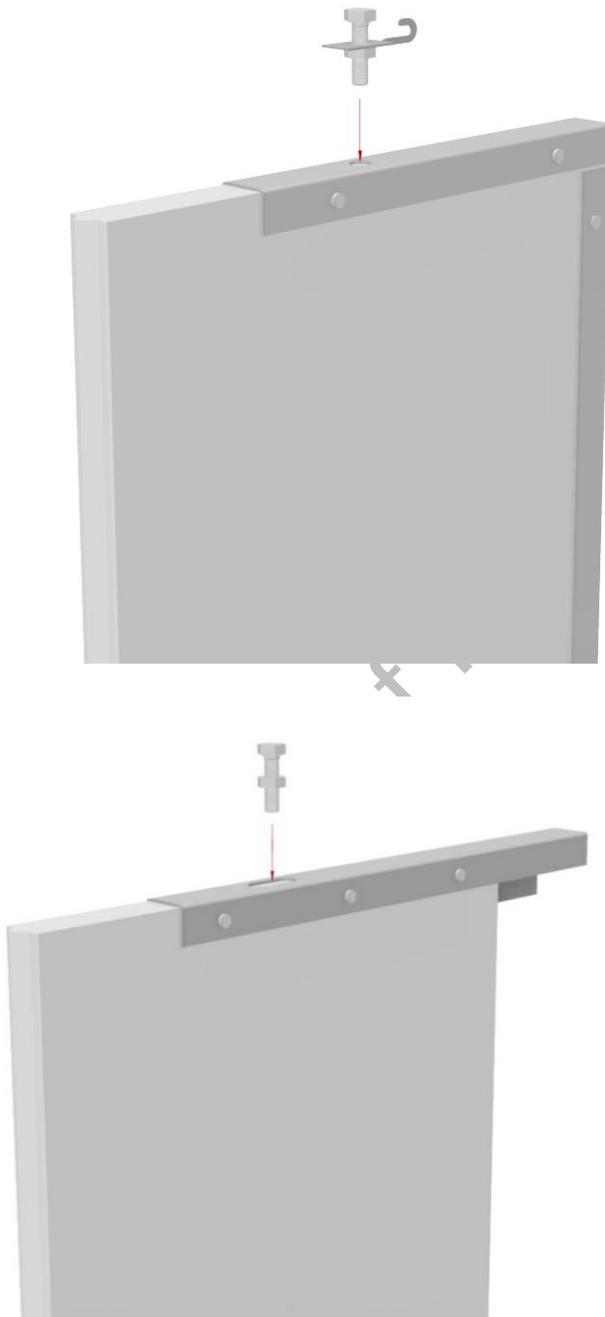
Please Note: To ensure free movement of the counterweight fasteners must not protrude.



Step 6 - Mount panels

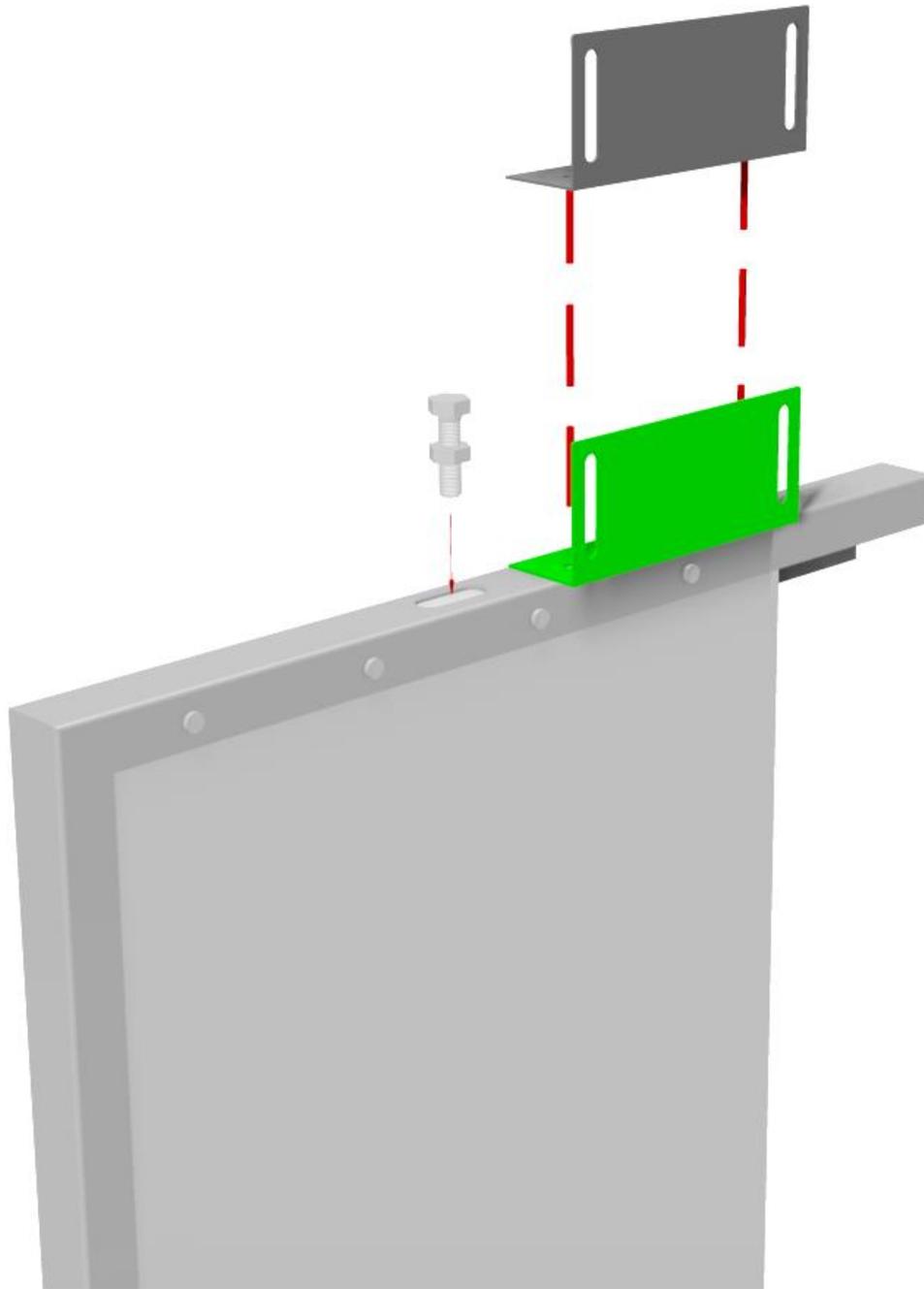
Insert the suspension bolts of the running wheels into the panels. Always start next to the aperture of the panel on the closing side and fasten the suspension bolt to the running wheel according to the detail below.

Make sure that the panel moves freely and then slide it to the closing side. Adjust all panels to the same height, free from the labyrinths.



Make sure that all panels are at the same distance from the wall and that the running wheels have correct positions in the rail. Repeat this step for all panels.

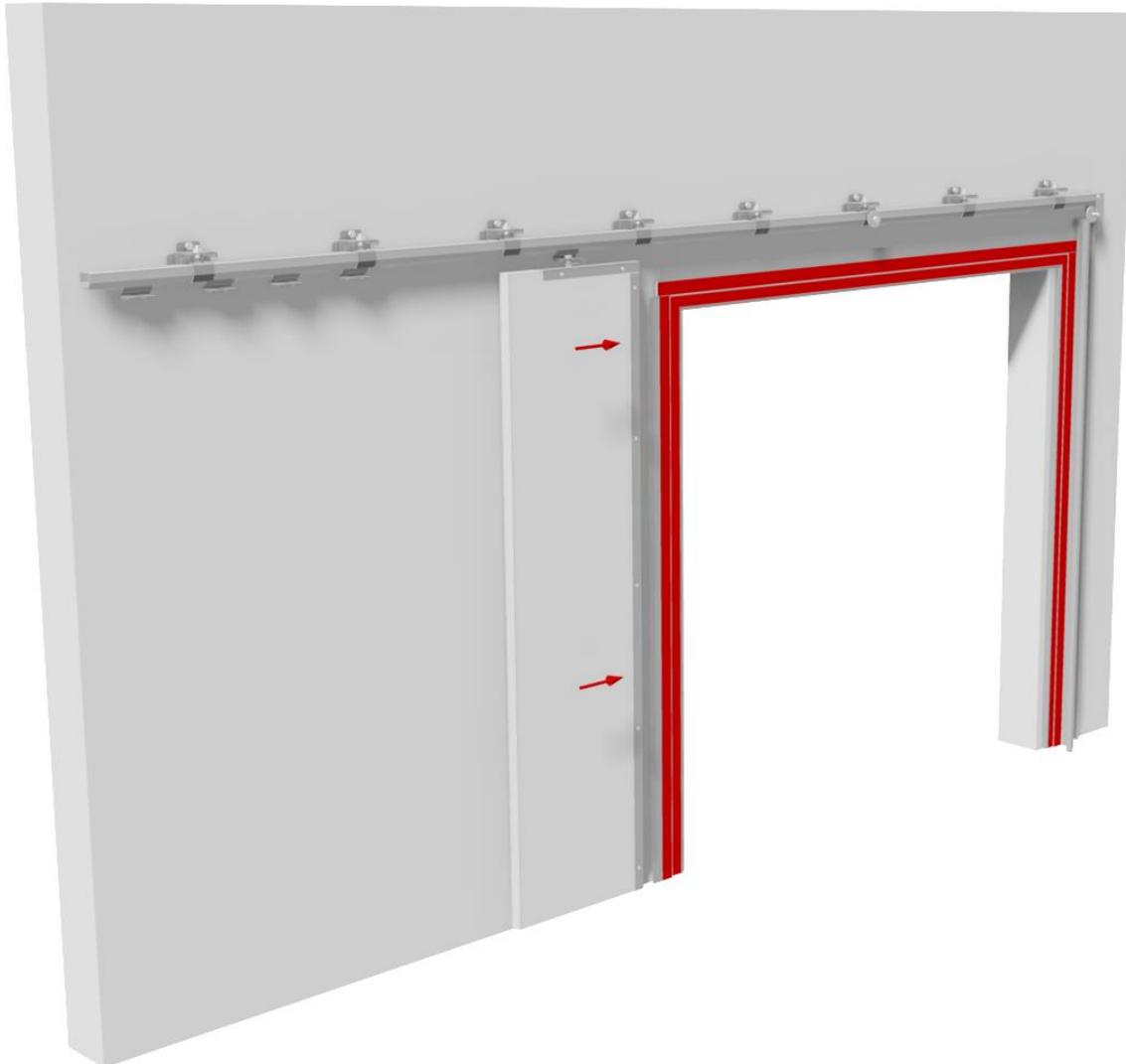
Place the carriage before placing the last panel in the rail. Check if panels in the rails are at the same height.

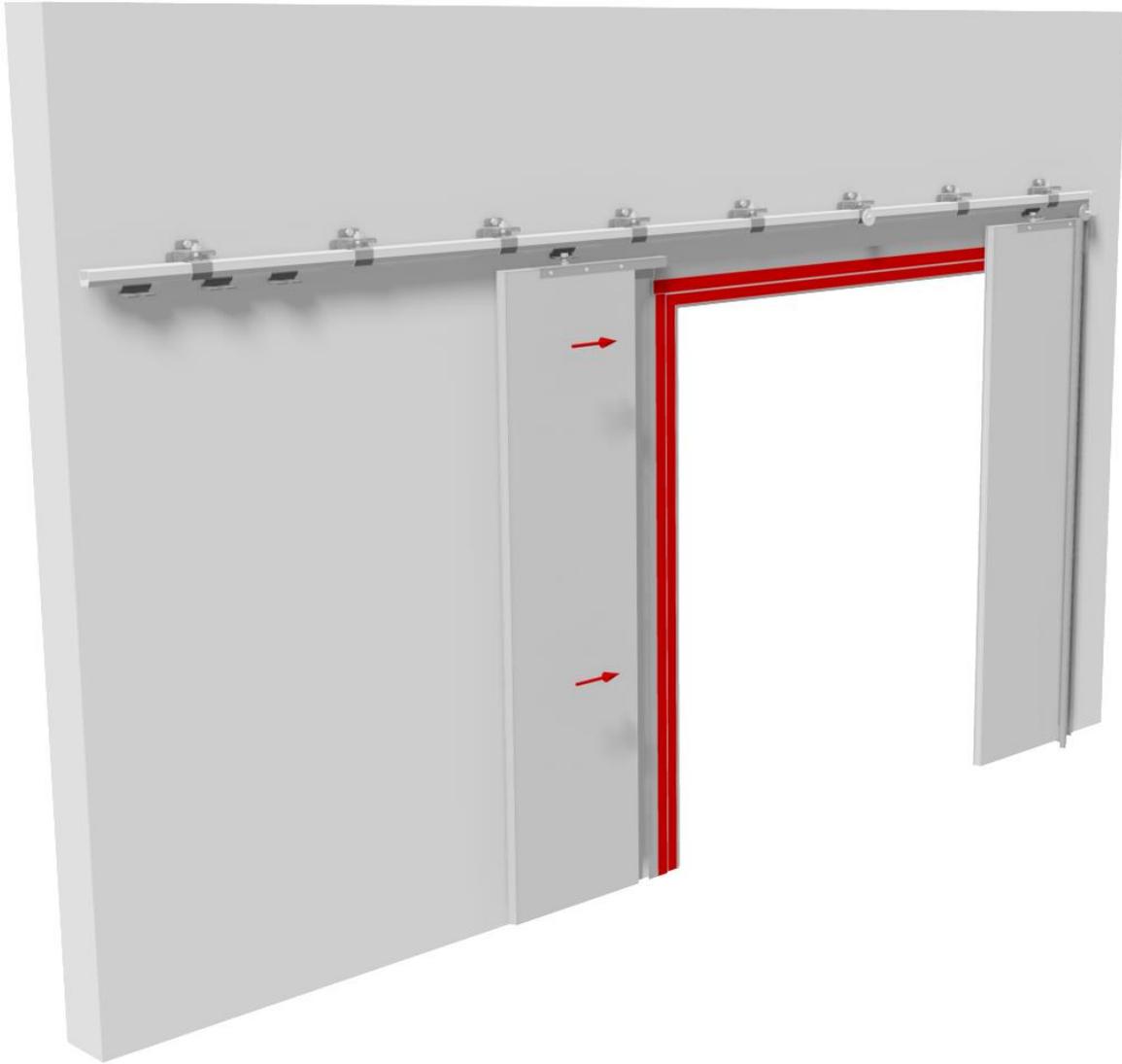


Make sure that the half counter nut on top of the modules is mounted hand-tight, not too tight. The space between the floor and the bottom of the door leaf must not exceed 23mm when door is closed.

Step 7a - Assemble the door leaf

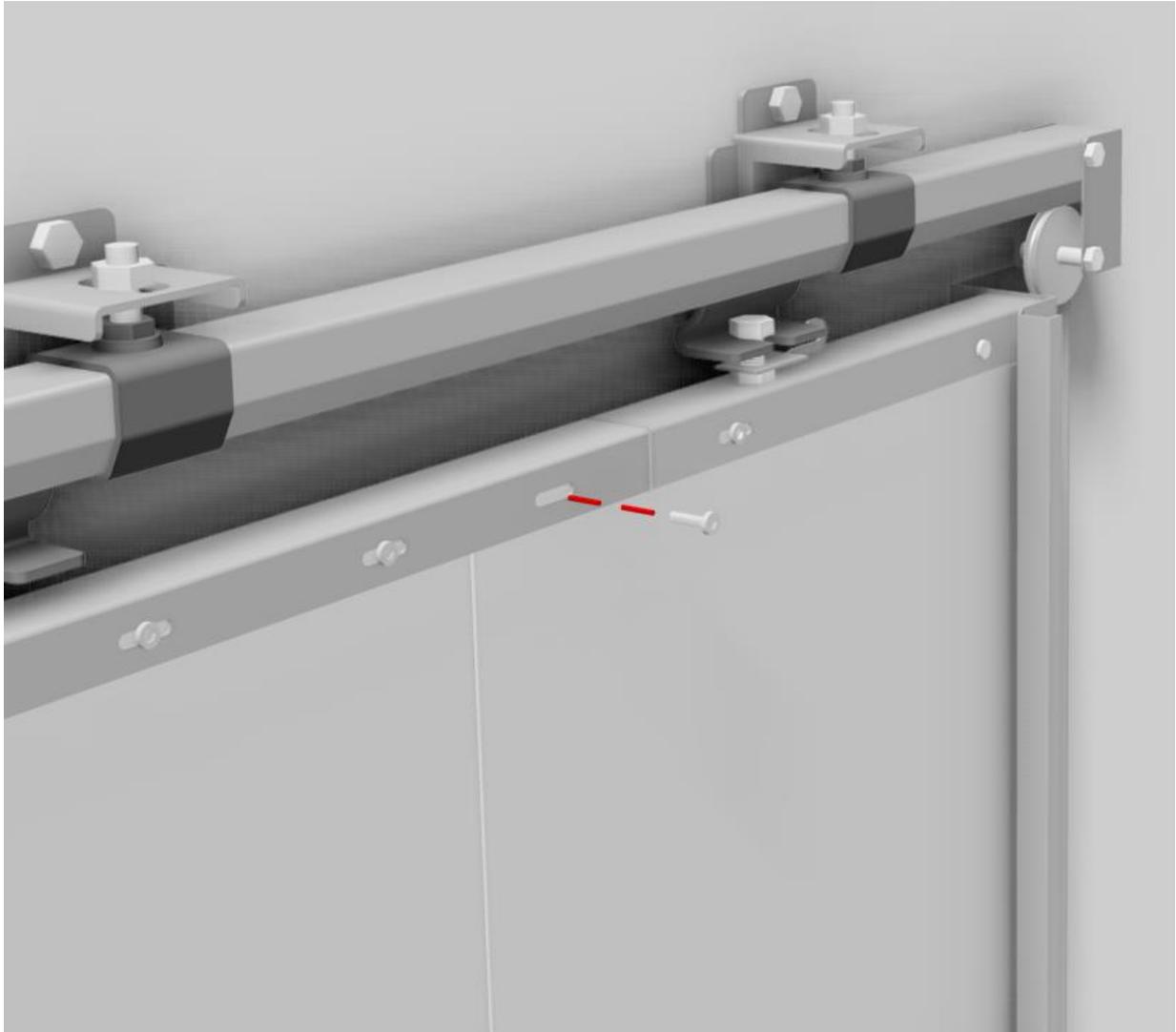
Slide the panels against each other and make sure that they fit properly (when straps are used these must be clear of the connecting strips). Check that the door leaf is perpendicular by measuring diagonally; the difference in size must not exceed 3mm. If this is exceeded, the shape of the door leaf must be corrected.





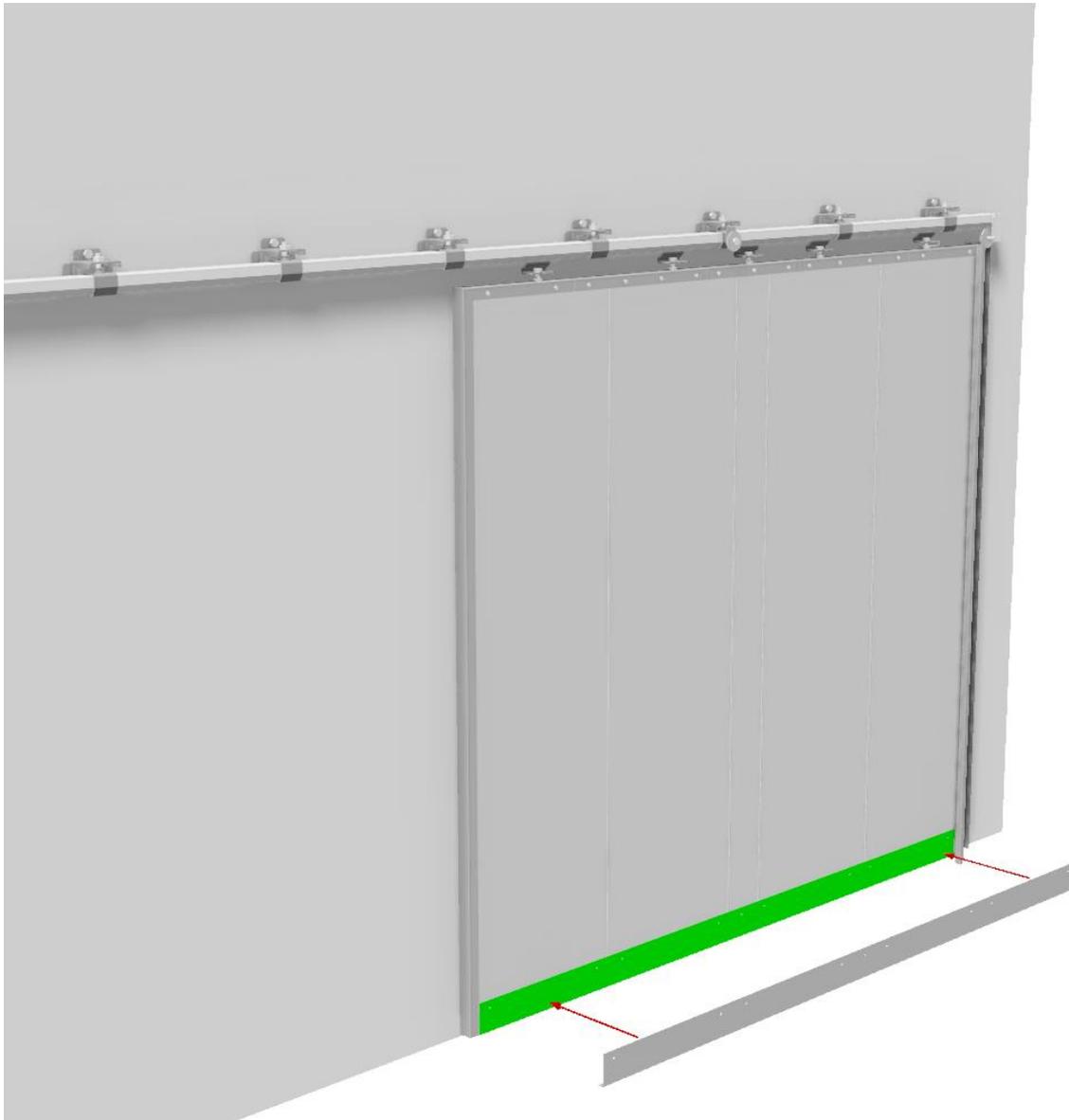
Property c

Use the screws supplied to fasten the door labyrinths at the top to each other. Apply screws without drilling in the middle of the slot hole with a maximum moment of 4 Nm.



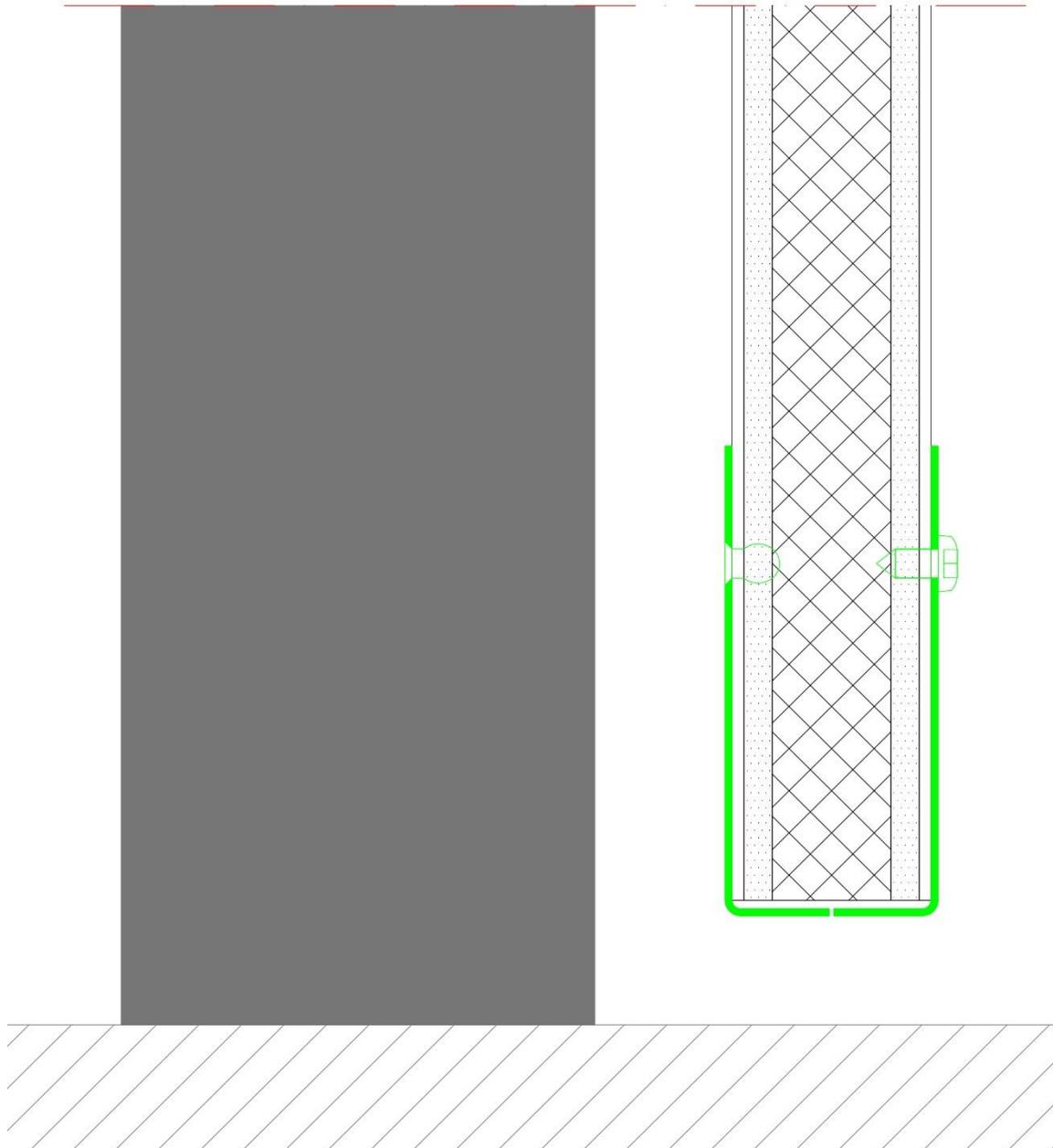
Property

Steel angles are included for connecting the panels at the bottom, half of the steel angles have countersunk holes, to be mounted on the wall side. The position of these steel angle is shown in the sketches below.



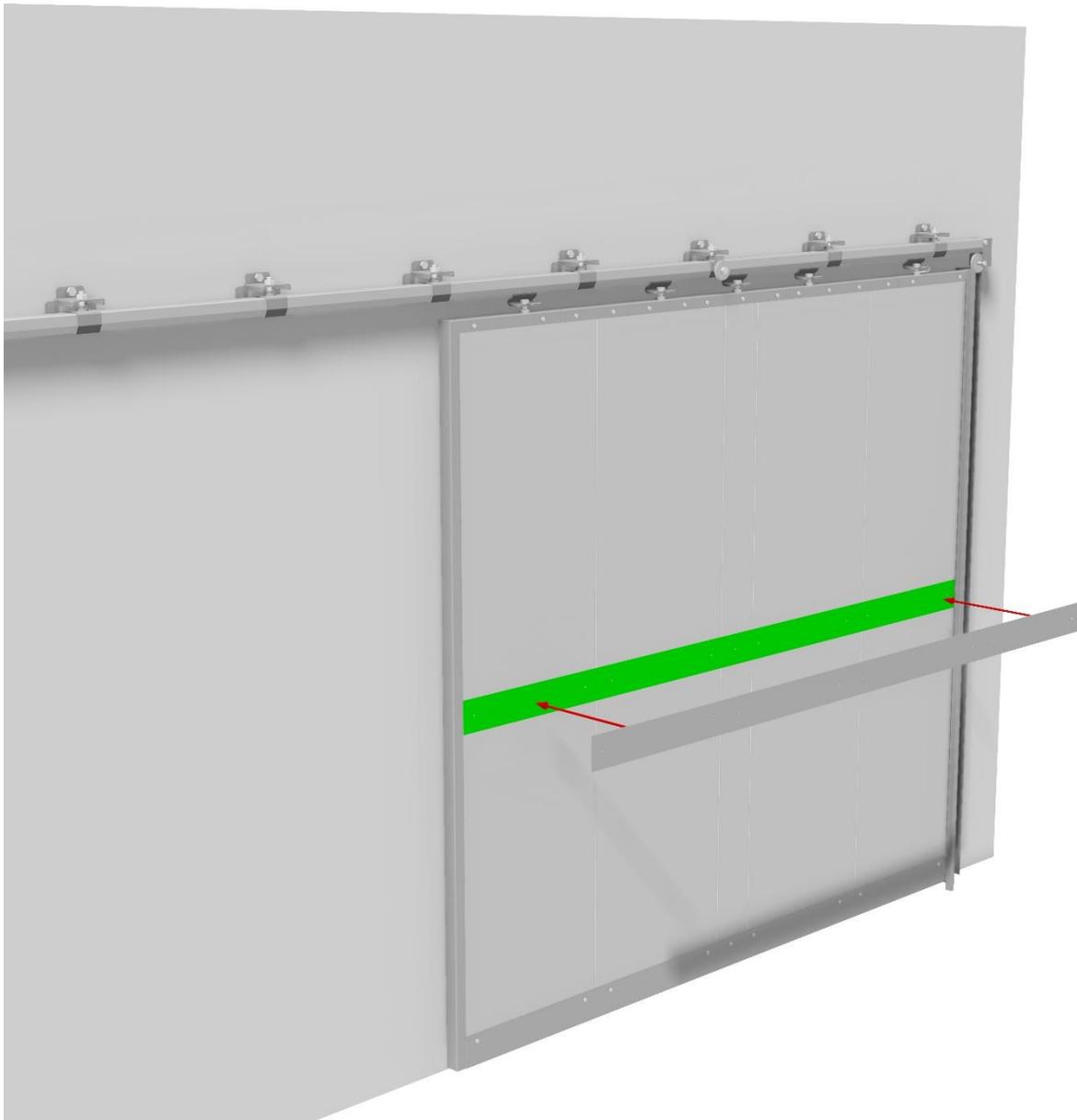
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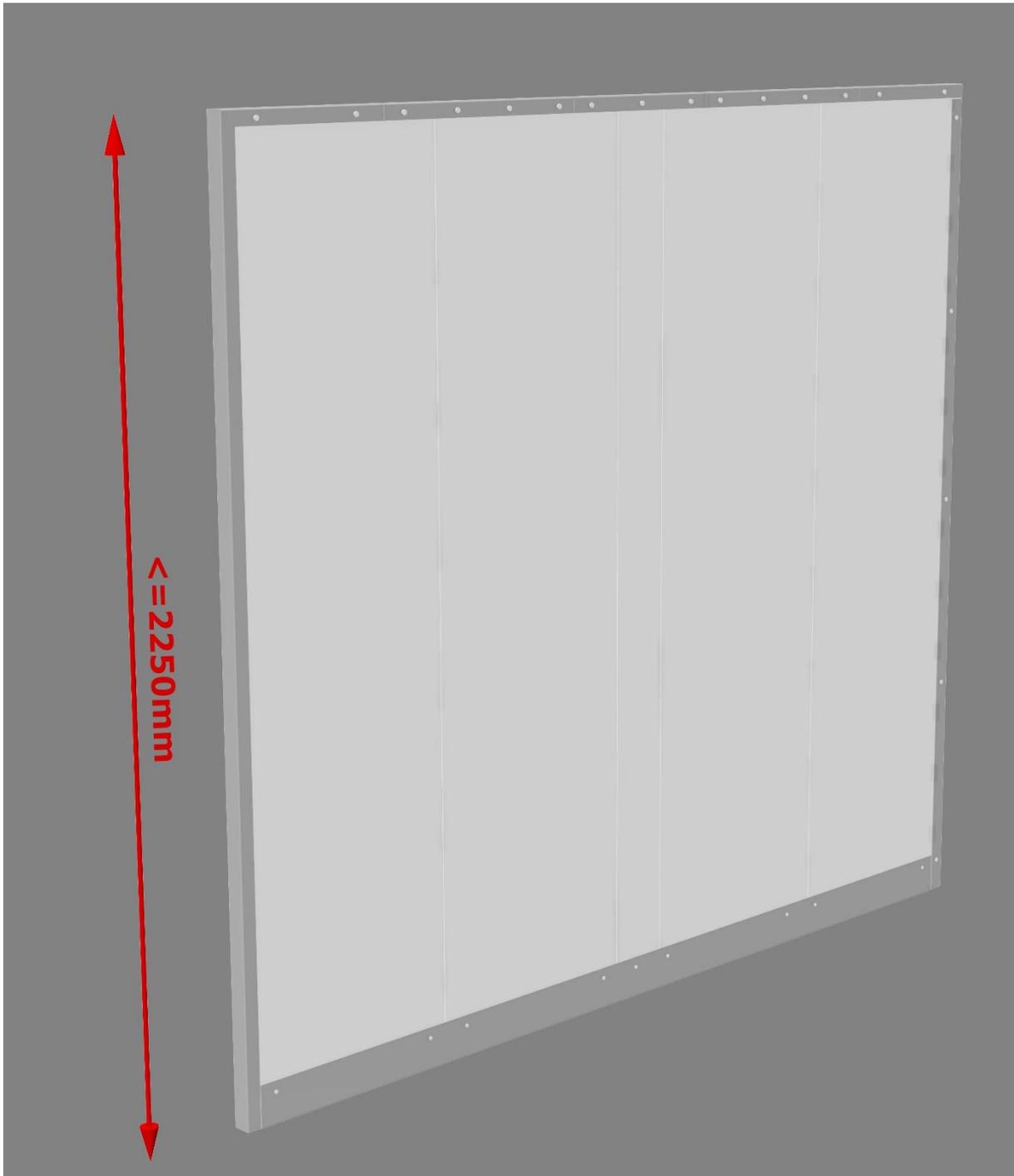
Attach the steel angles on the bottom of the door leaf. The holes must be pre-drilled on the wall side with a 5 mm drill and a maximum depth of 15 mm in the panel. Use the blind rivets provided to attach them. The steel angle on the visible side of the door leaf must be secured without drilling with a maximum moment of 4 Nm.



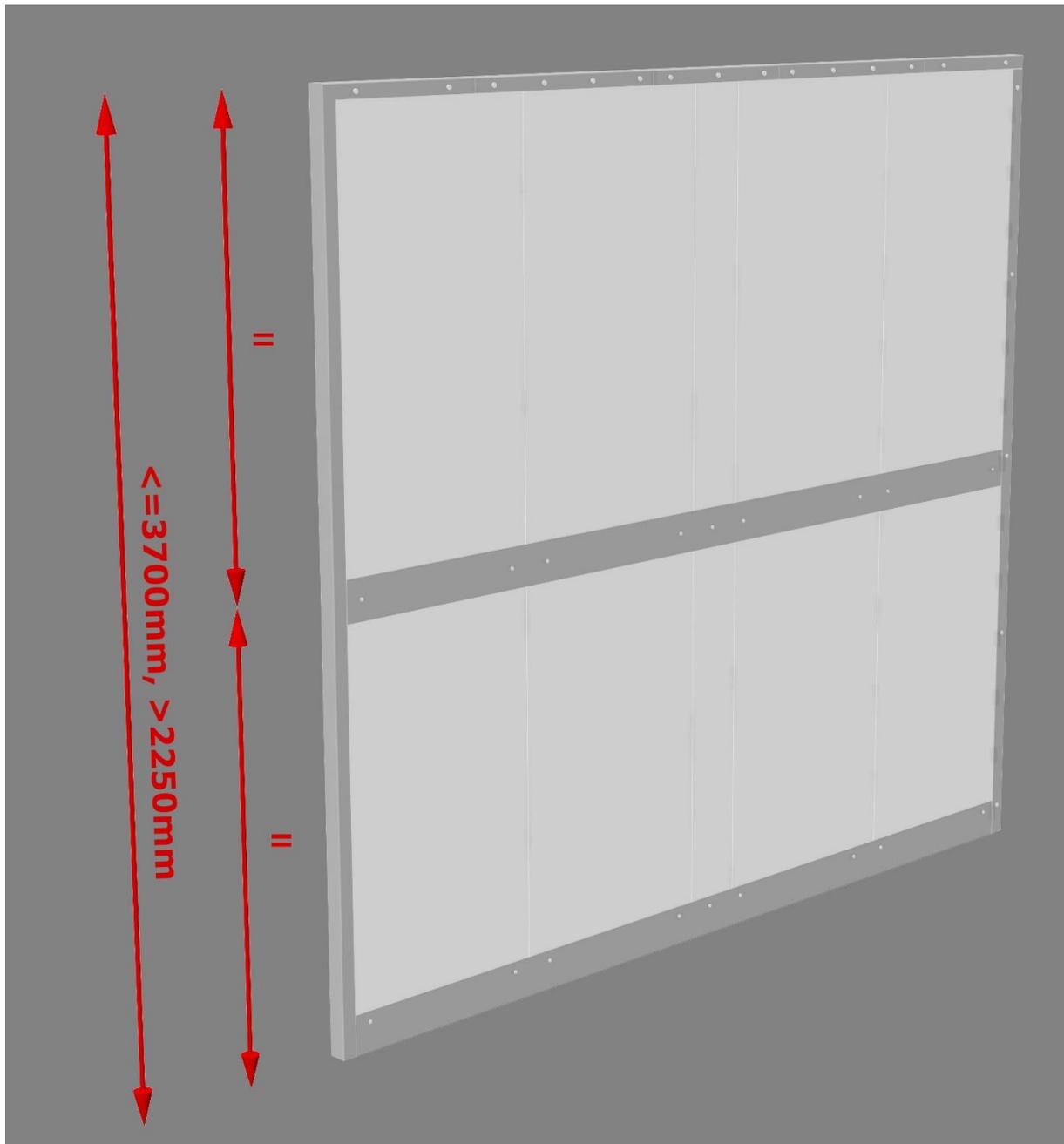
Step 7b - Mount connecting strips (optional)

Connecting strips may be included (2, 4 or 6 strips) depending on the height of the door (when doors of are a certain width the connecting strips could be provided in 2 parts). Half of the strips have sunken holes, these must be mounted on the wall side. The position of these coupling strips is shown in the sketches below.

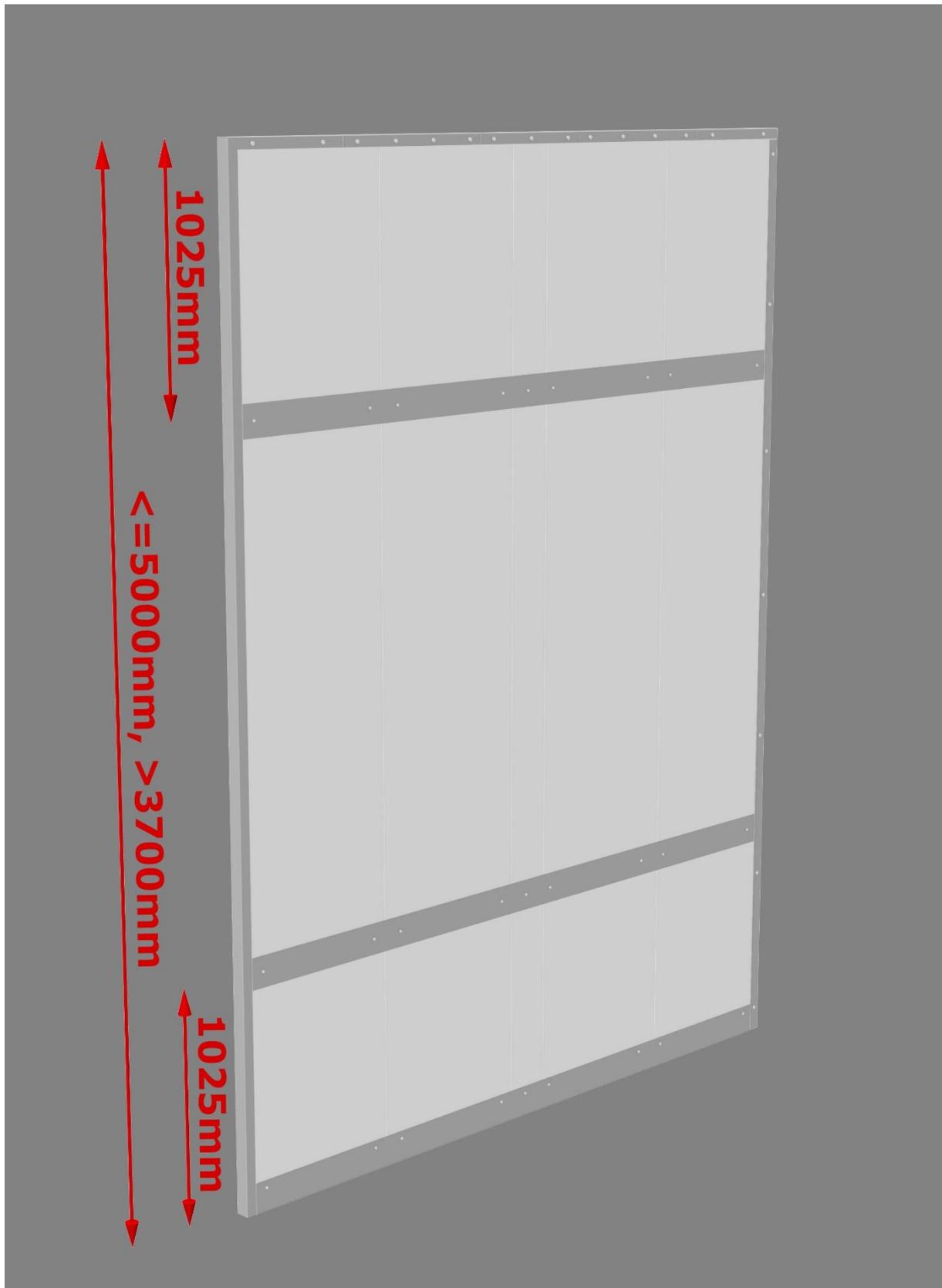


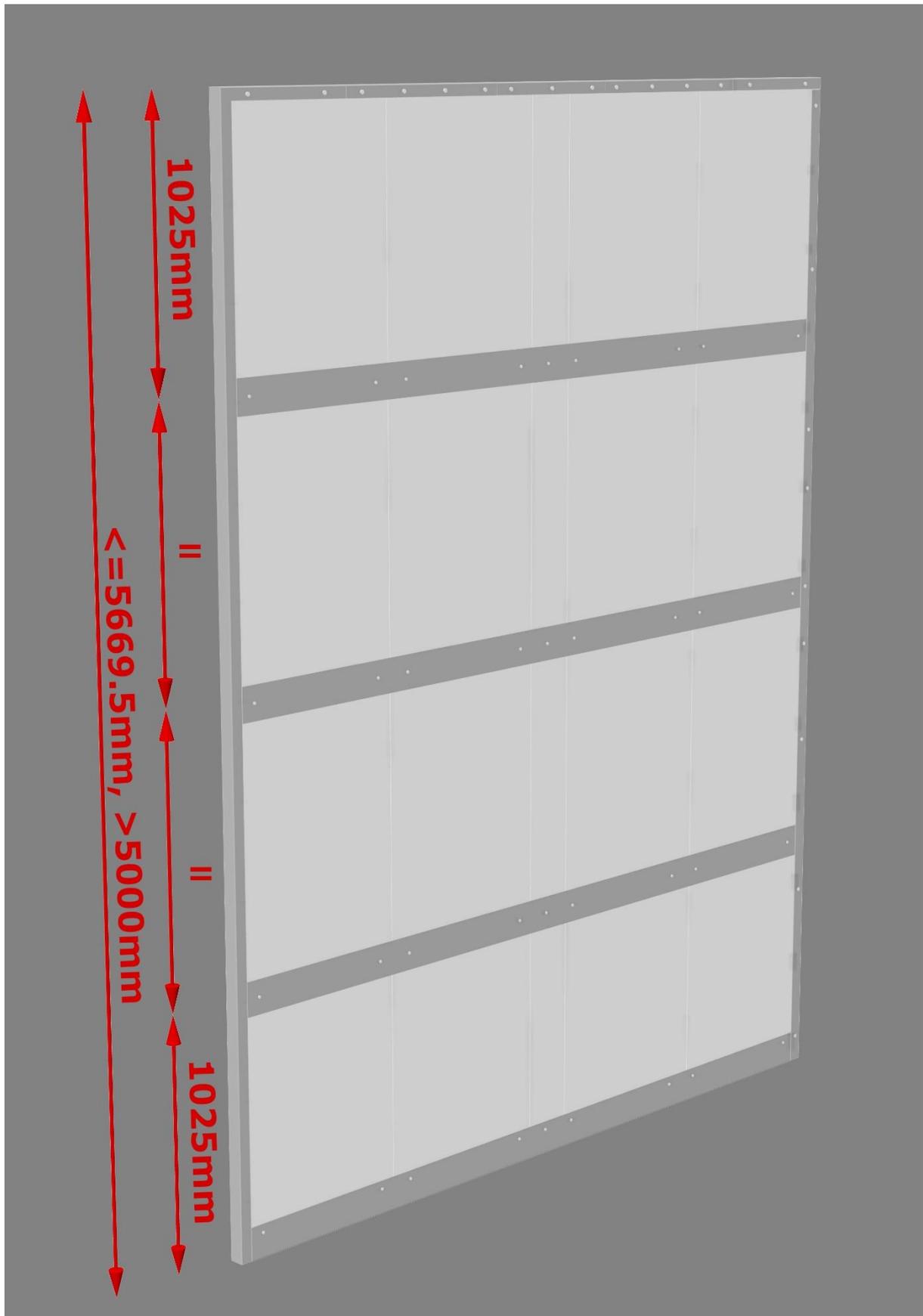


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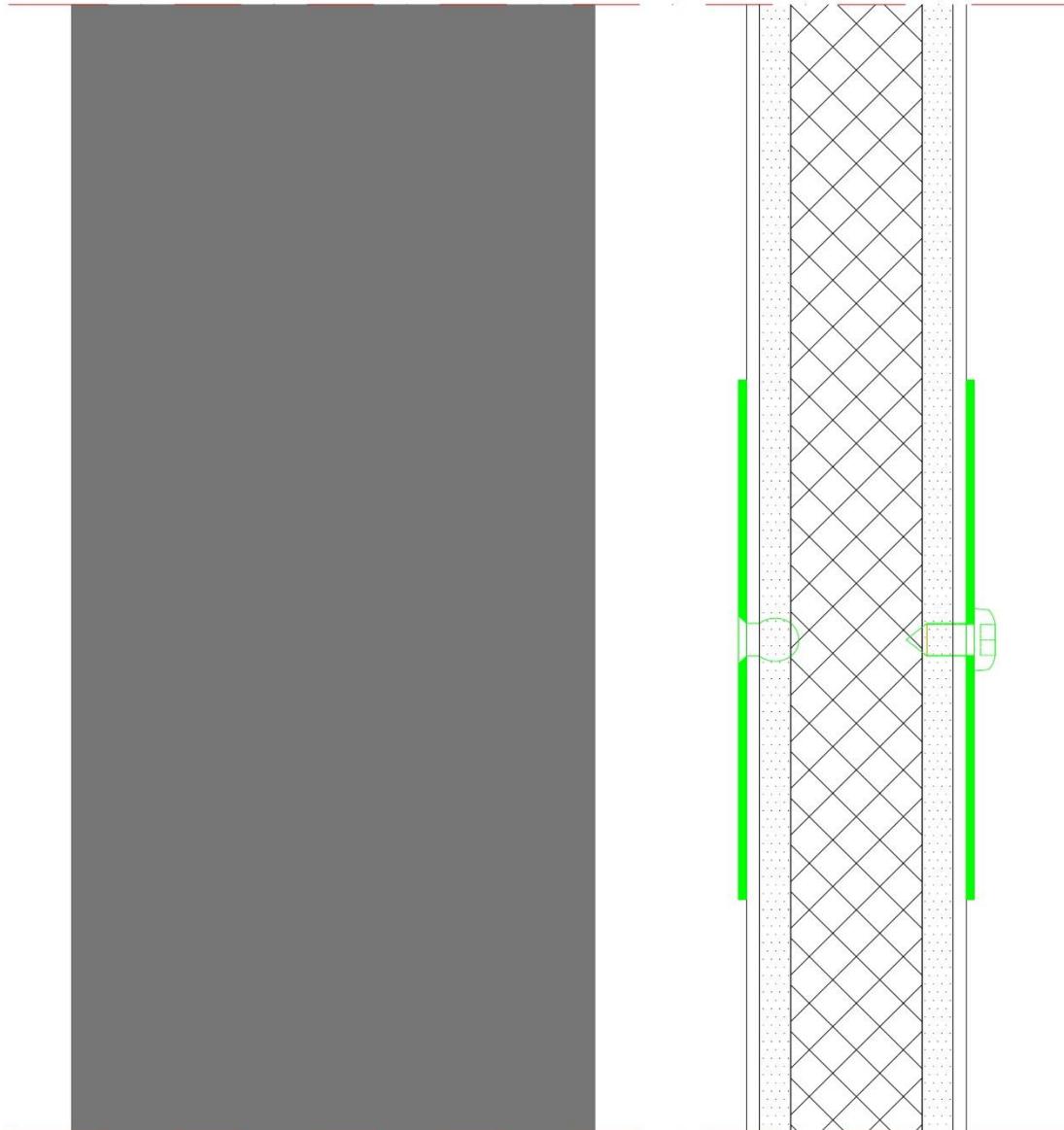


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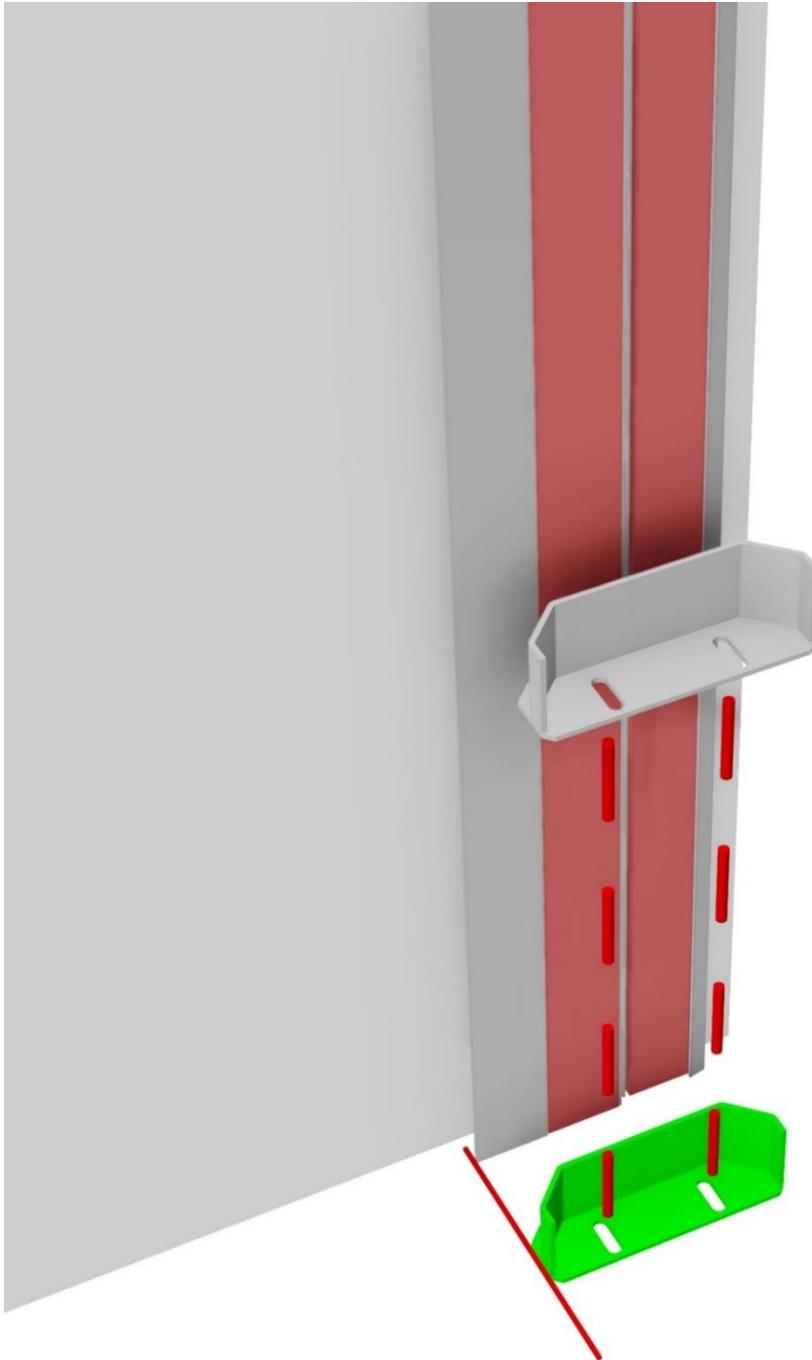
Fix the connecting strips on the door leaf according to the sketch below. On the wall side, holes must be pre-drilled with a **5 mm drill bit and a maximum depth of 15 mm** in the panel. Use the blind rivets provided to attach them. The visible side of the door leaf must be fastened without drilling with a maximum moment of 4 Nm.

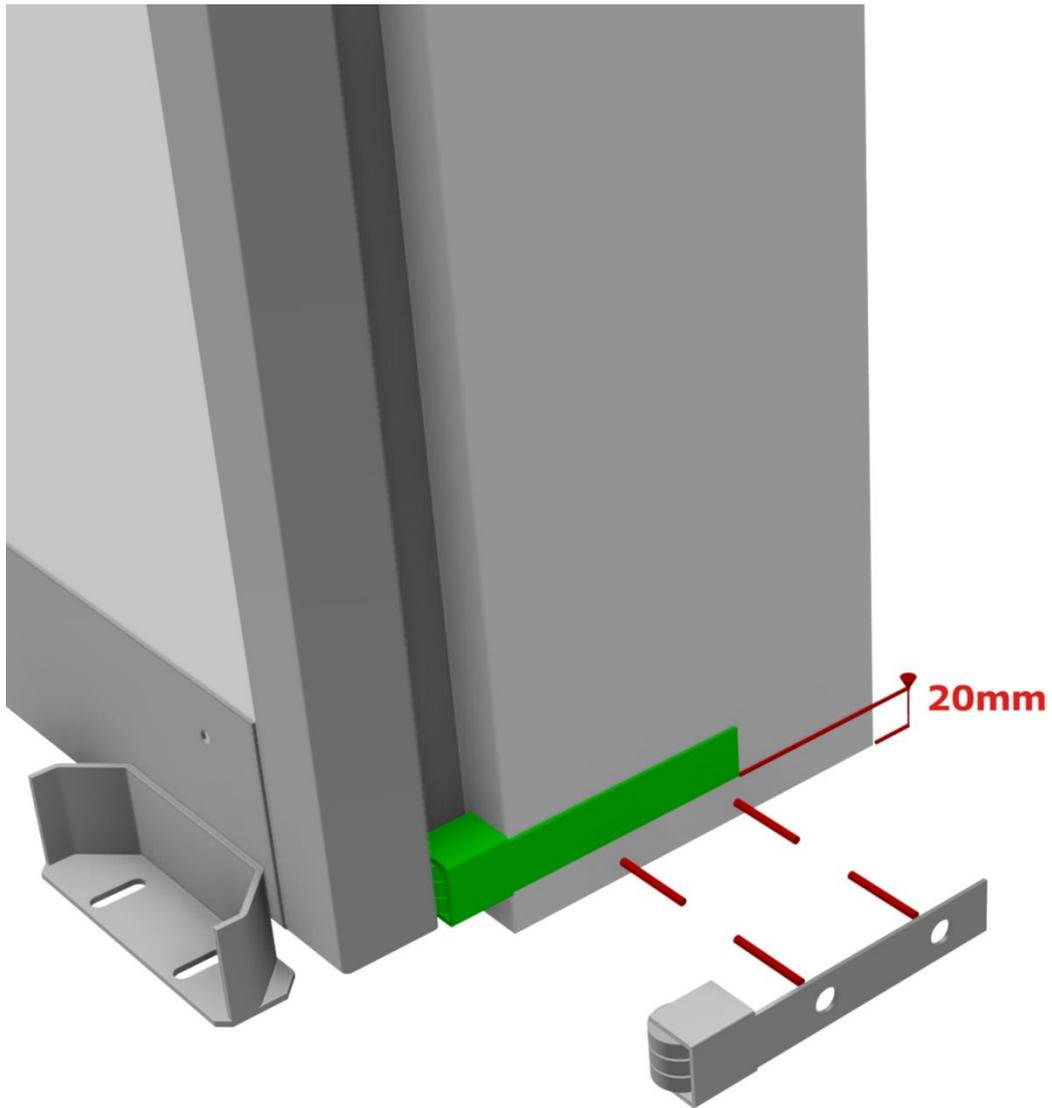


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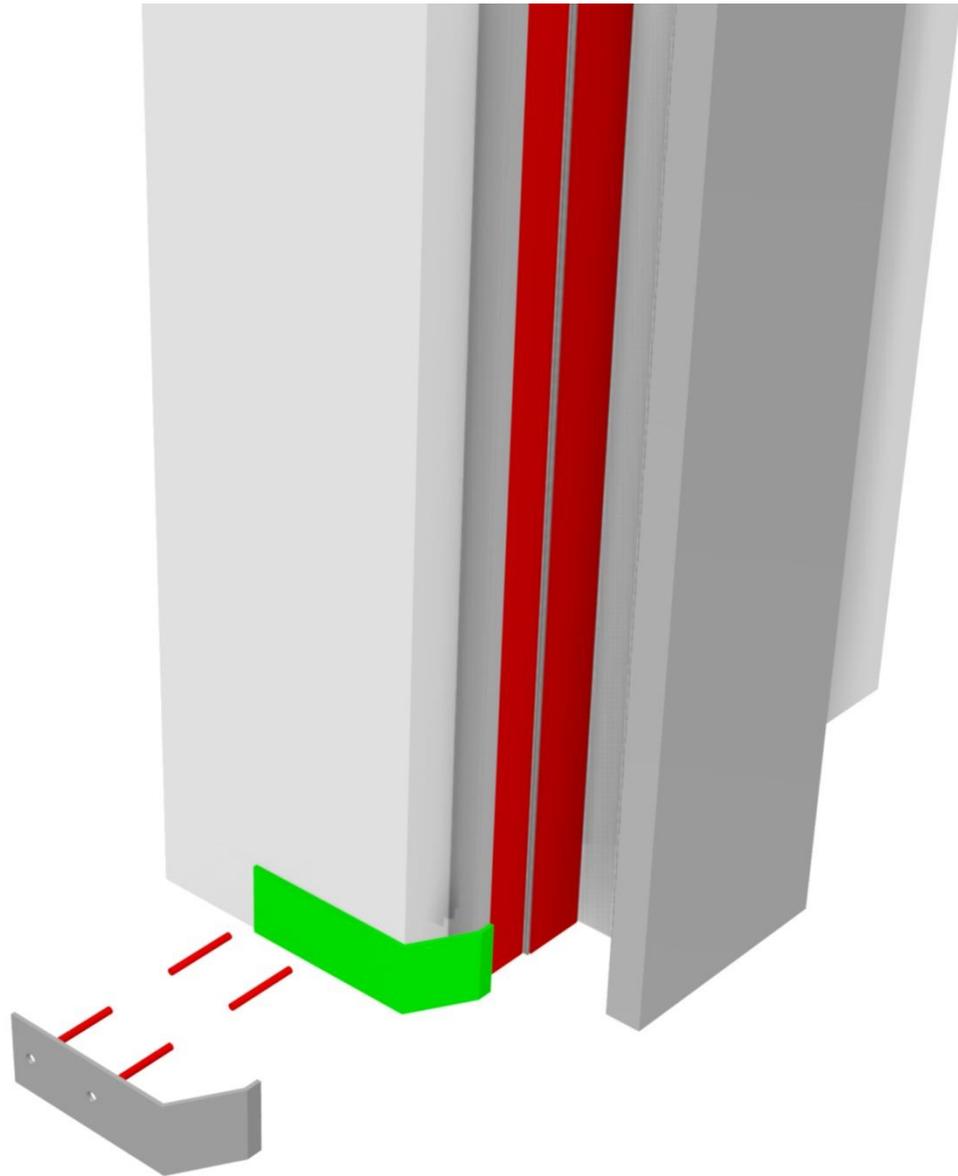
Step 8 - Mount the floor guide

See the sketches below to place the floor guide on the non-closing side. Make sure that the door labyrinth and the wall labyrinth move freely from each other and are hooked into each other correctly.





Prope,

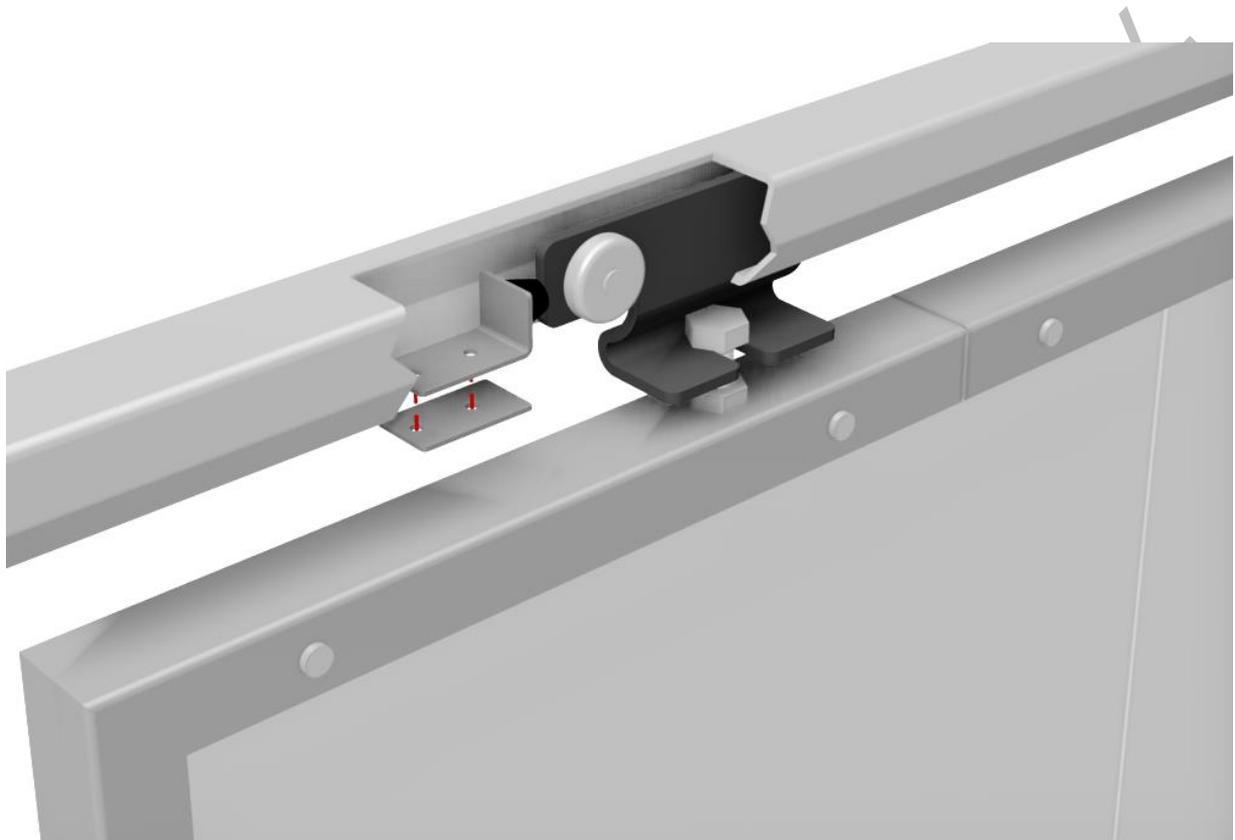


Proprietary

Step 9 - Adjust the end stop

Now slide the door back until it is flush with the aperture, place the end stop against the last wheel and secure end stop as shown below.

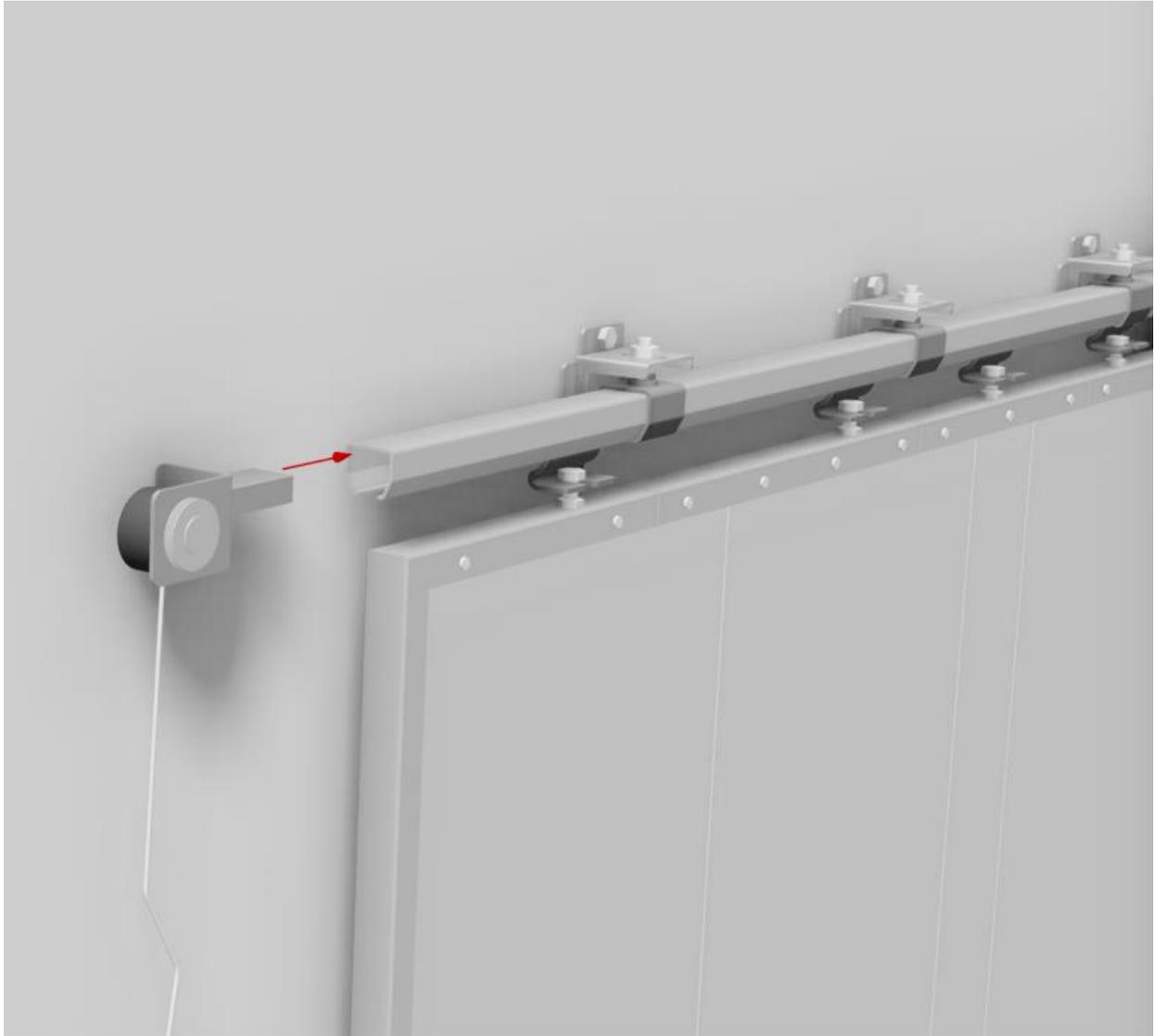
It must now be possible to open and close the door smoothly.



Property

Step 10 - Mount the speed controller

Check the freewheel direction of the return pulley on the speed controller. If necessary change the direction by turning the return pulley, then mount it on the support and slide it into the rail.



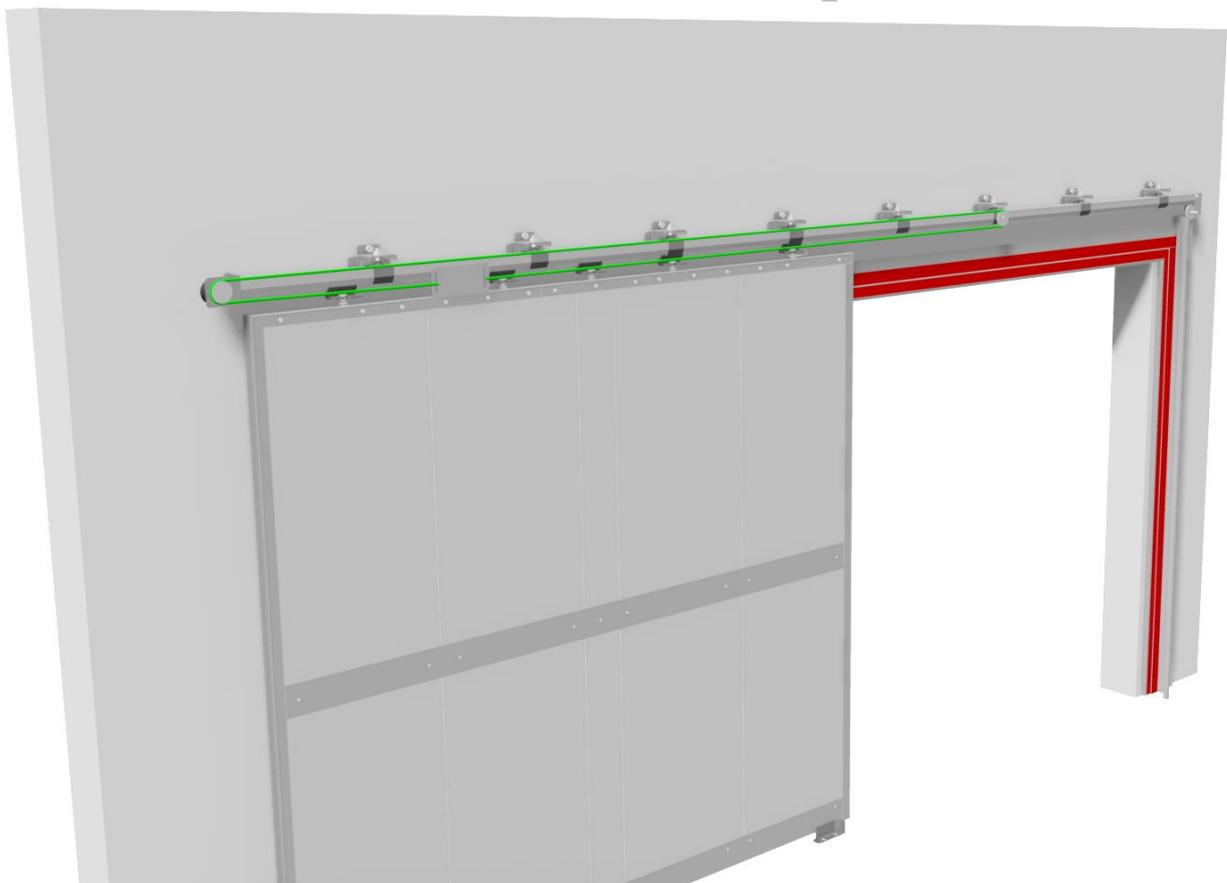
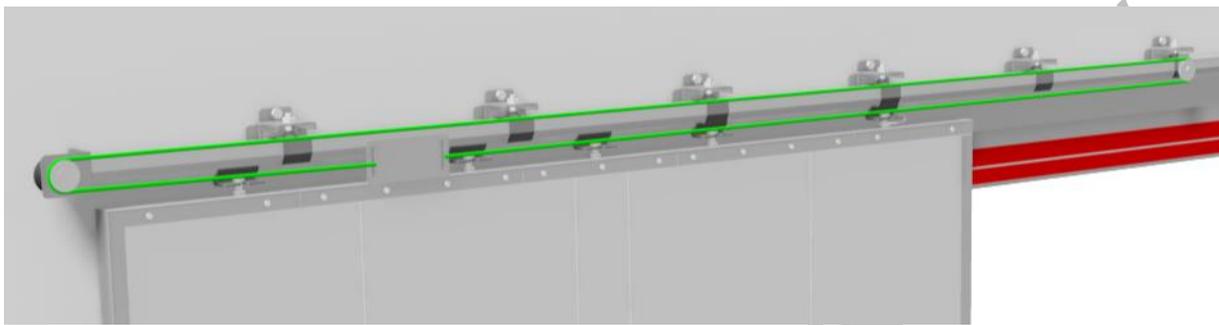
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Step 11 - Mount the carriage & steel wire

Mount the threaded tensioner on the carriage to the door leaf (on the side of the speed controller).

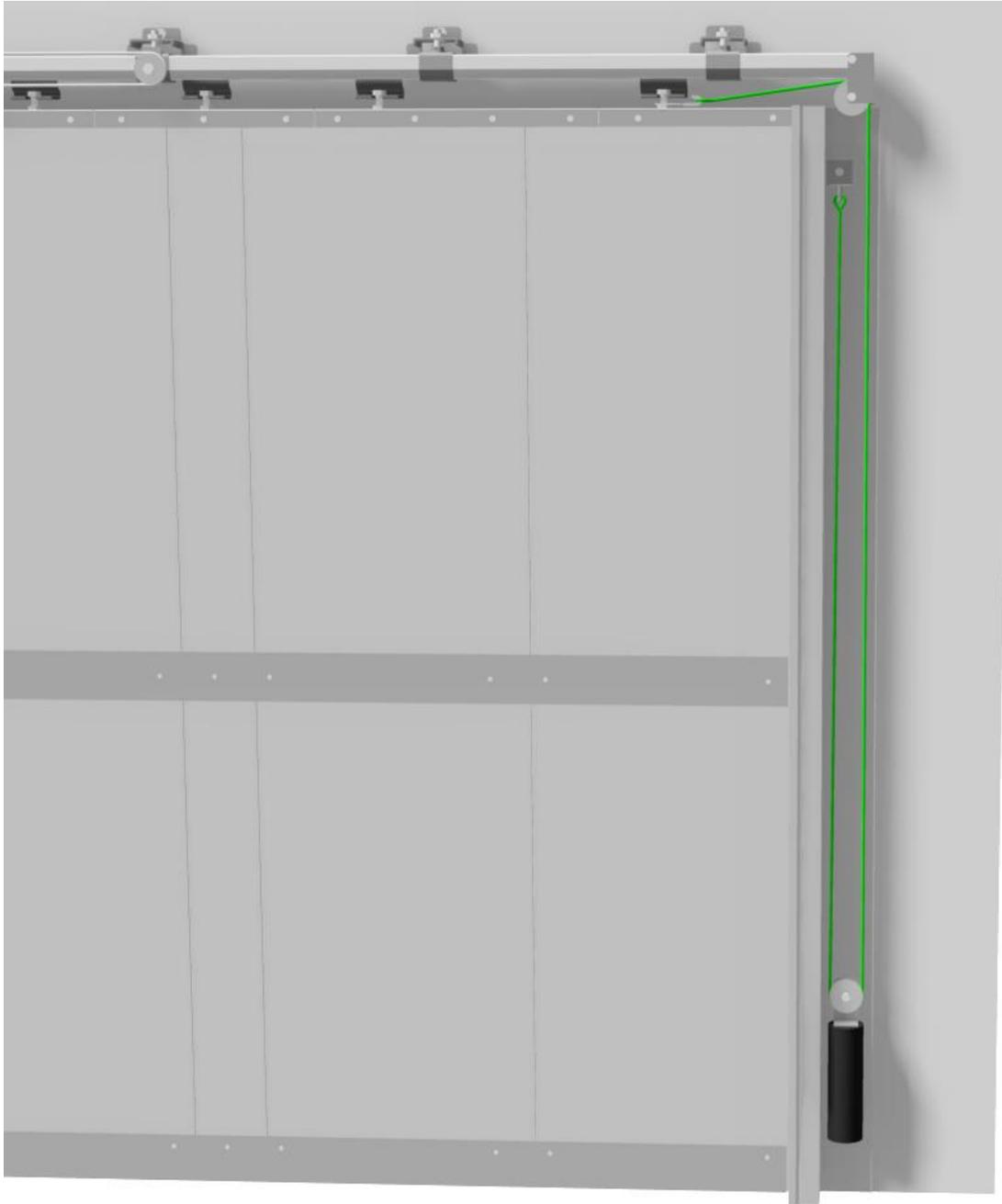
Attach the wire rope to the carriage and via the return pulley over the speed controller with the tensioner back to the carriage.

Make sure that the steel wire is not twisted, then tighten the wire.



Step 12 - Amount counterweight

Fasten the cable bracket under the running wheel on the closing side according to the drawing below. Place the door in the closed position, attach the supplied steel wire to the cable bracket.



Then guide the wire over the return pulley of the weight shaft and the return pulley of the counterweight to the attachment of the wire at the top.

When attaching the cable, make sure that the counterweight is positioned +/- 100mm from the floor. Check that the wire runs properly through the grooves of the pulleys and make sure that the wire rope is not twisted.

Step 13 - Connect the speed controller

The speed controller has 2 connection points 24V to energize the brake. These must be connected to the fire alarm system (24V NC contact) on site. When this is not available, an optional control may be supplied with external smoke detectors to be connected according to the manual provided.

If this step is not required, proceed to step 14.

Step 14 - Check direction of rotation

Check that the speed controller has the correct direction of rotation. If the door can be opened but not closed (because the cable slips), the direction is correct. If this is not the case, the direction of rotation of the speed controller can be changed by loosening the retaining ring at the front and turning the black return pulley, then tighten the retaining ring again.

Step 15 - Adjust the speed controller and correct closure

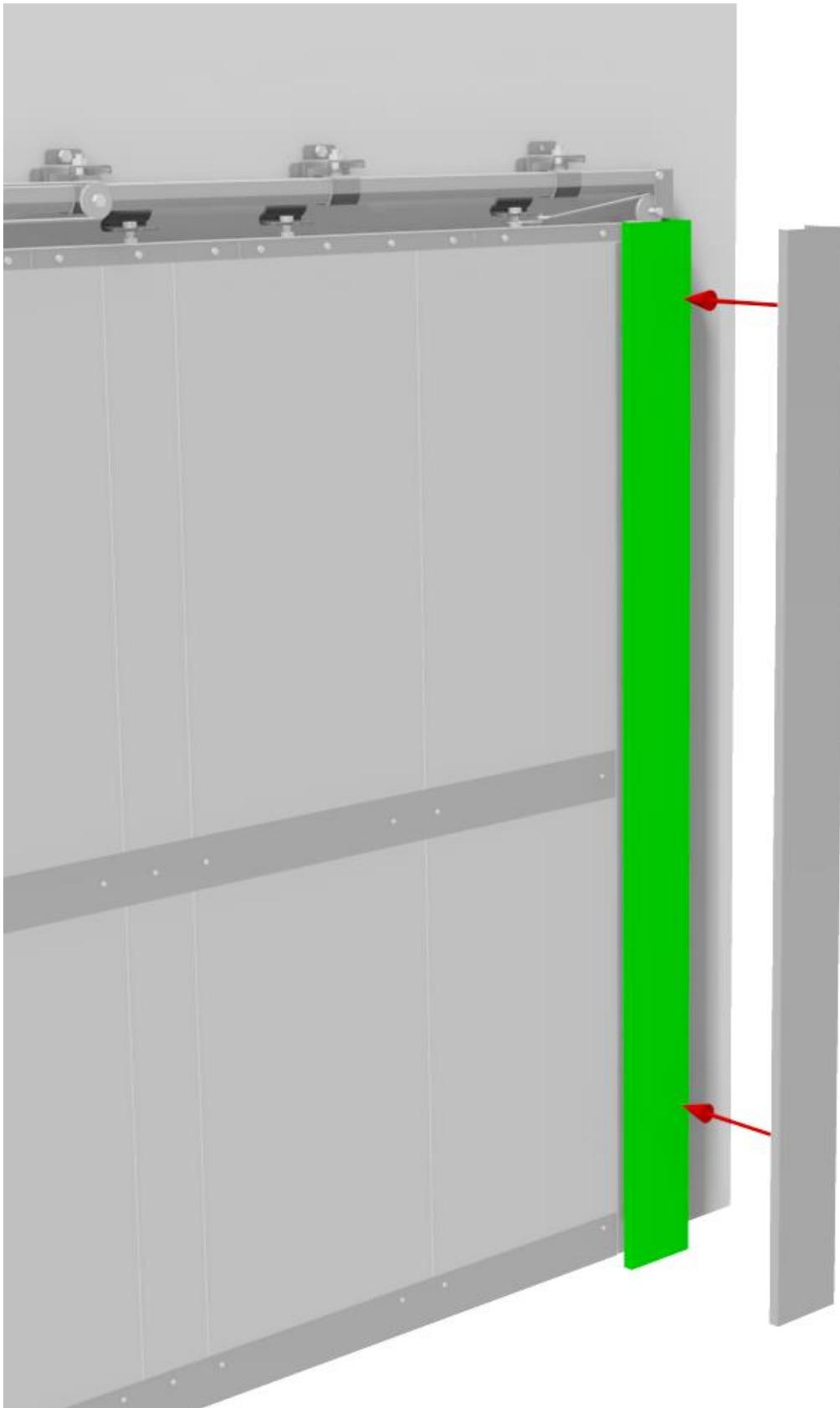
Disconnect the power supply to the speed controller. The counterweight will then pull directly on the door leaf. The maximum closing speed must be set to at an impact moment of 200 Nm.

Check twice if the door moves freely from its fully open position. Stop the door at 1/4 from the non-closing side, halfway and at 300 mm before the closed position and check if the door reaches full closure from these positions.

When the door is not closed by the counterweight, it is possible to adjust the speed controller by lifting and turning the steel clip at the rear. Please, take care to stay within the maximum impact moment.

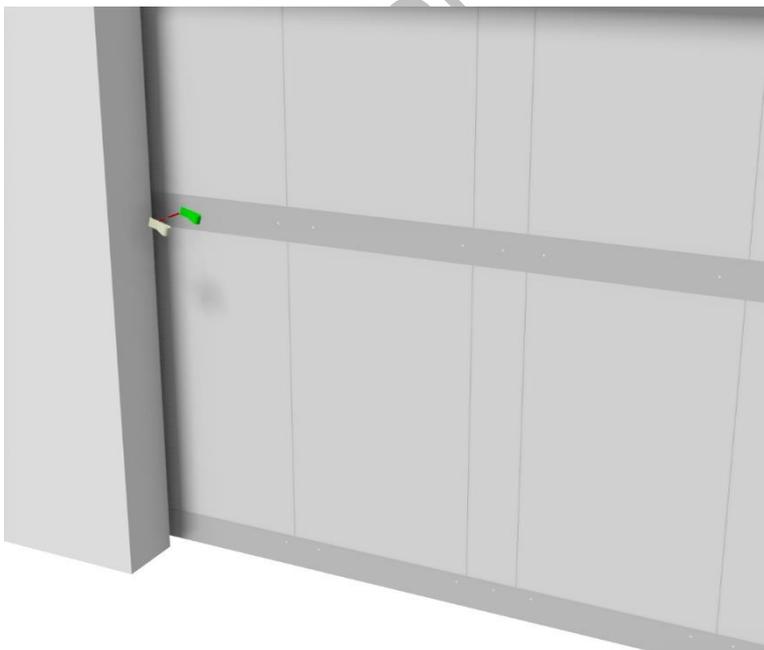
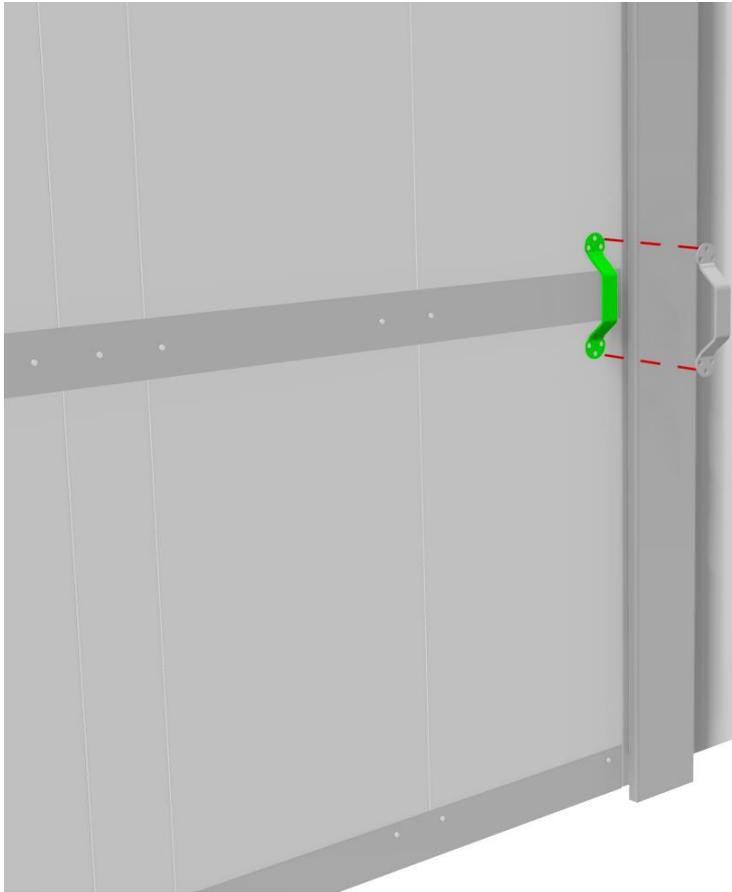
Step 16 - Mount the cover of the weight shaft

Now mount the cover of the weight shaft.



Step 17 - Mount handles

Mount the steel handle & flexible handle according to the drawings below by inserting the screws provided into the panel at max. 4Nm.



Step 18 - Check sliding door

Check that the CE sticker is clearly visible and matches the installed door.

Open the sliding door 2 more times, let the counterweight close it and check if it works correctly.

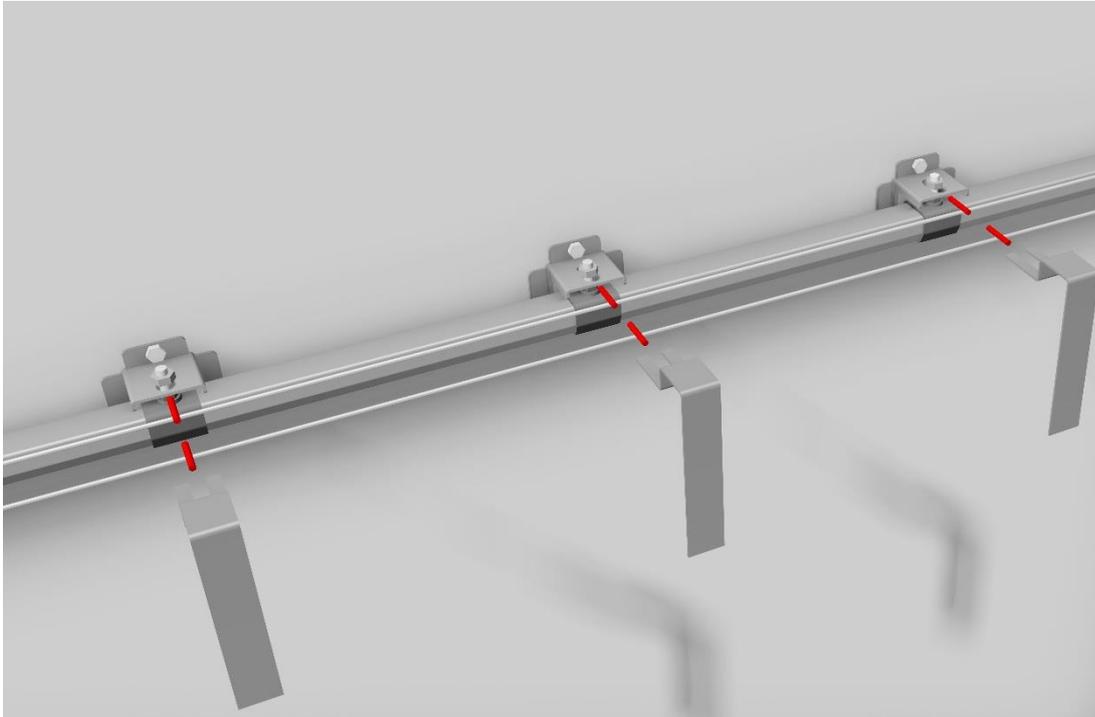


Property c

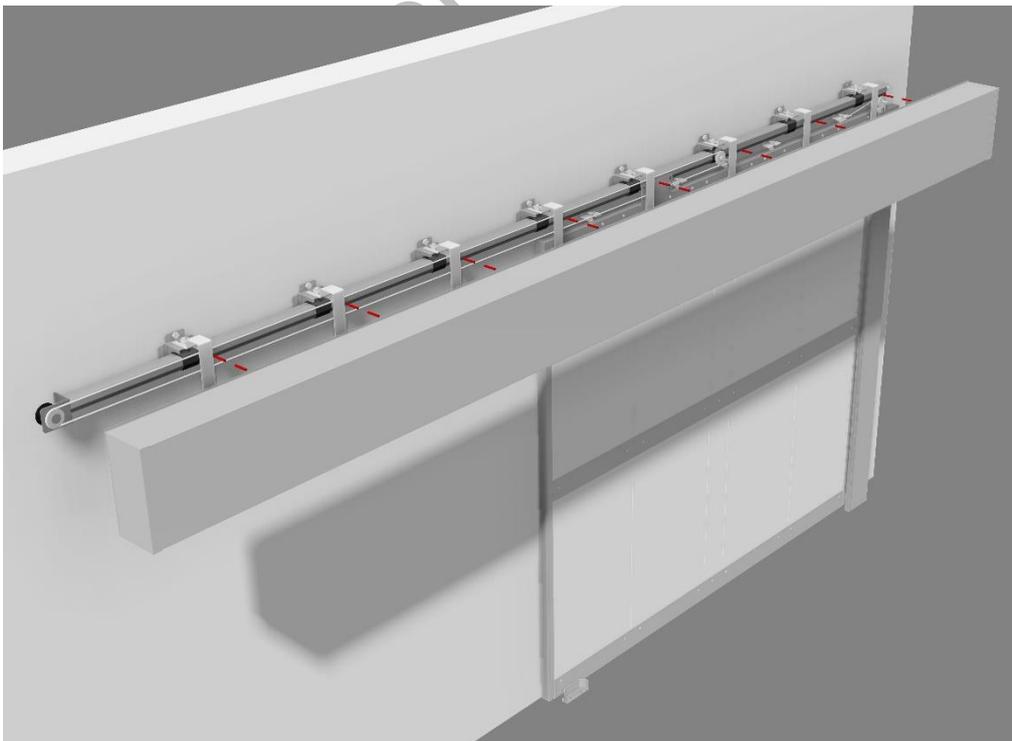
OPTIONAL MOUNTING

Step 18 - Mount rail cover

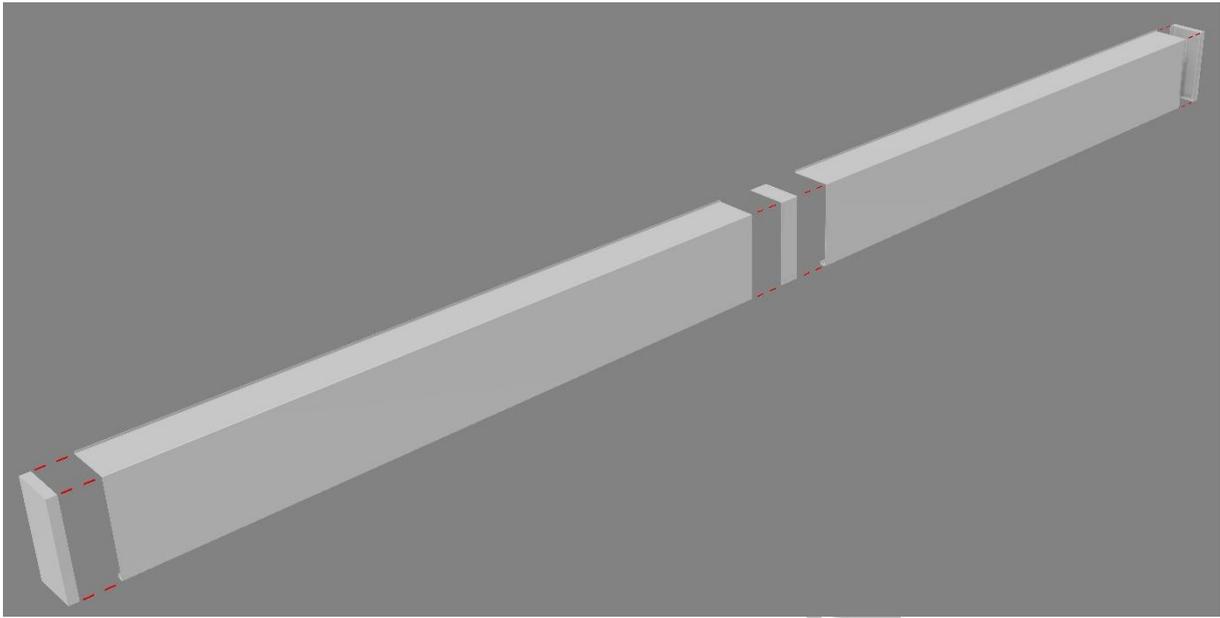
Mount the brackets of the cover (F-profile) in a straight line on the brackets as shown below.



Then make sure that the rail covers are mounted in a straight line by means of the coupling profile.



Assemble the cover sections and connectors all around.



Property of Metacon-Next

9 Initial use

The first use is performed by the installation company. This party must complete the document; "Appendix A" immediately after installation and leave it at the door.

The door should be checked against the check/maintenance list and each step should be ticked off and signed incl. name in block letters.

The door has a sound pressure level of 70 dB(A) or lower when commissioned.

When this check is positive on all points, the door can be delivered to the user.

10 Maintenance, faults and repairs

10.1 Regular maintenance

Each door is provided with an identification stating the type of door and the order number and position number. In case of any malfunction, this number should be communicated to the supplier. Metacon-Next keeps a technical file in the archive with reference to the order number and position number.

For the correct functioning of the installation it is necessary to have regular maintenance carried out. In order to claim on the manufacturer's warranty, maintenance must be carried out at least once a year under "normal" use. Maintenance should be performed by a competent installer. Metacon-Next recommends entering into a maintenance contract with the supplier. **Insufficient maintenance may lead to an unsafe situation. See EN 12635.**

The following steps should be checked during maintenance (and first use);

Appendix B "Door type - maintenance instructions".

10.2 Cleaning

The frequency with which the door is cleaned is up to the user. It is recommended that once a year the door be wiped only with a damp cloth to prevent any damage. Other cleaning methods will result in termination of the manufacturer's warranty. Make sure that electrical parts do not come into contact with moisture during cleaning. Note that climatic conditions may lead to a changed cleaning frequency.

10.3 Faults and repairs

During maintenance and repair work, the door must be powered down. Troubleshooting and repairs should be carried out by competent installers. In case of a malfunction, the supplier should be contacted. If the supplier cannot solve the malfunction, Metacon-Next can be contacted.

11 Storage and transport

The parts are packed for transport on a pallet in foil or in a plastic sleeve, so that they are protected from the weather during transport. The pallet should always be stored in a dry and frost-free place. To avoid condensation in the packaging, please open the packaging upon receipt. Transport is relatively easy as Metacon-Next only delivers semi-finished products. If the package weighs more than 20 kg, it must be moved with suitable lifting equipment. Unloading the goods must also be carried out using suitable equipment. Unless stated otherwise, packages can be unloaded with a forklift.

12 Environment and disposal

The locally applicable environmental regulations must be observed (separate disposal of environmentally harmful substances). For de-installation of the product, the reverse sequence of the installation instructions can be applied (see chapter 8).

Property of Metacon-Next B.V.

Appendix A: " SGC EI(1) 60 / EW 120 - Installation data"

Door data	
• Order number
• Position
• Serial number
• Location of the door
• Date of installation
Manufacturer's data	
• Name	Metacon-Next B.V.
• Address	Zuidbaan 450 2841 MD Moordrecht The Netherlands
• Phone number	+31 (0) 182 23 15 25
• E-mail	info@metacon-next.com
• Website	www.metacon-next.com
Details of the installation company	
• Company name	
• Phone number	
• E-mail	
• Website	
Drive data	
• Manufacturer	
• Product number	
• Serial number	
Control data	
• Manufacturer	
• Product number	
• Serial number	
• Software version	
Safety equipment data 1	
• Manufacturer	
• Product number	
• Serial number	
• Software version	
Safety device data 2	
• Manufacturer	
• Product number	
• Serial number	
• Software version	

This door must be used according to the instructions described in Chapter 4 of the operating manual.

Appendix B: " SGC EI(1) 60 / EW 120 - Maintenance Instructions"

1. Identify the door by means of a type of identification
2. Start with an overall visual inspection
3. Close the door completely
4. Carry out the overall visual check again
5. Disconnect the control unit from the mains supply
6. Checking that all fasteners/points are present/used and that they are secure
7. Check rails for damage and/or wear
8. Check panels and wire ropes for damage and/or wear
9. Check that the armor is still properly aligned in the rails (the space between the outside panel and inside rails should be equal on the left and right)
10. Checking chain transmission for chain tension, wear and alignment
11. Check that the limit switches are still correctly adjusted;
 - Top position: underside of armor maximum equal to day height
 - Bottom position: panels stacked (door leaf must not hang on the flame hook)
 - Overclose adjustment: check that the door closes properly and that the flame hook drops into the wall hook
12. Check safety components for proper operation
13. Control of closure at fire alarm
14. Check electrical cabling for damage and fastening
15. Check the batteries in the control unit for function and delivery date, they should be no more than 2 years old (ambient temperature may shorten service life)
16. Checking that the bearings, adjusting rings and gears are secured
17. Check electrical closing time measurement, note in logbook
18. Check for gravitational closure, plus time measurement, record in logbook
19. Read out cycles/movements in control box, note in logbook
20. Record performed actions, observations, and replaced parts in the logbook
21. Check if the documents are present at the door

Periodic replacement of the following components is necessary for the continued proper functioning of the door with the declared performance give;

Replaced after;

Turning wheels
Rail wheels
Steel cables
Palusol

	cycles	year
Turning wheels	5000	10
Rail wheels	10000	10
Steel cables	5000	5
Palusol	25000	20

