

User manual

Metacon-Next OHD-C EI(1) 60 / EI(2) 90 / EW 90

Metacon-Next OHD-C EI(1) 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.

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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.

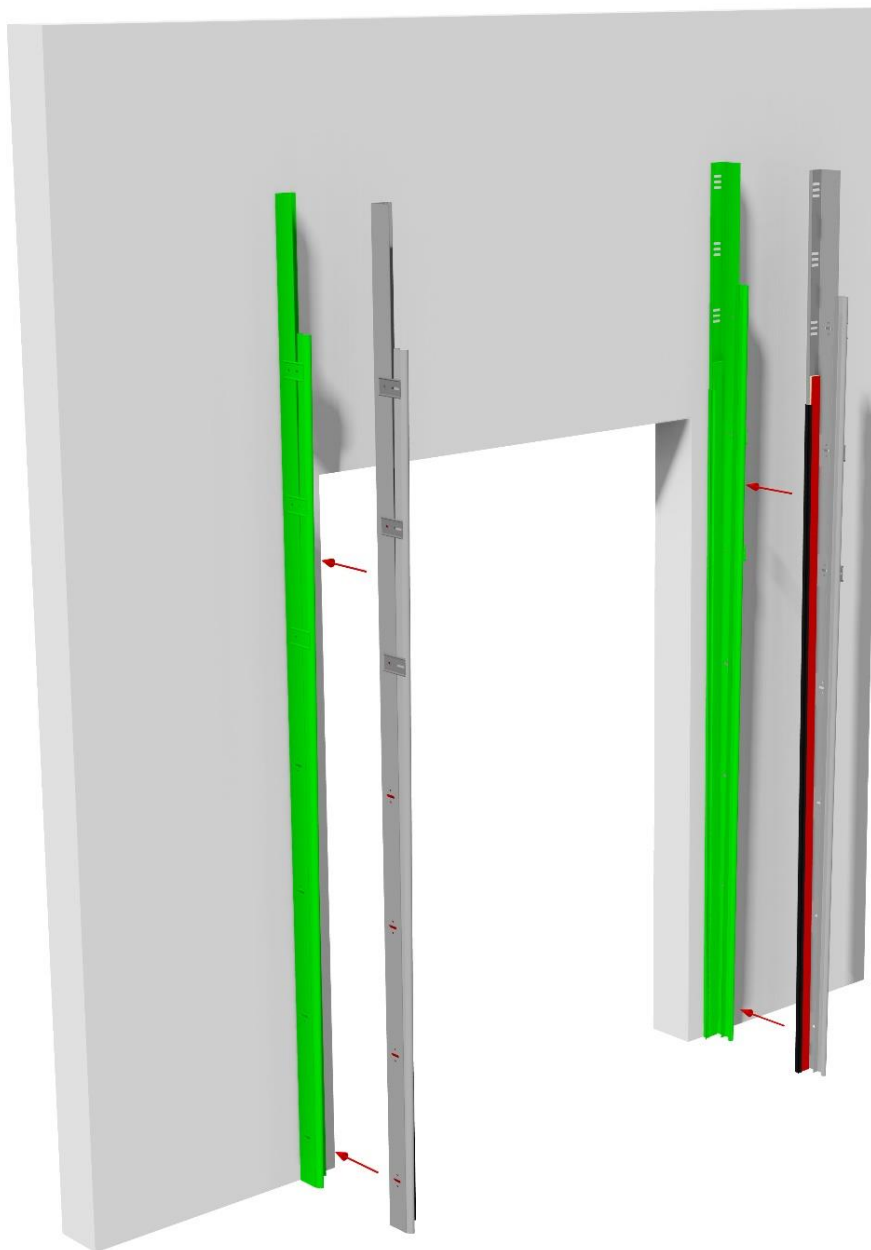
8 Installation Instructions

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.

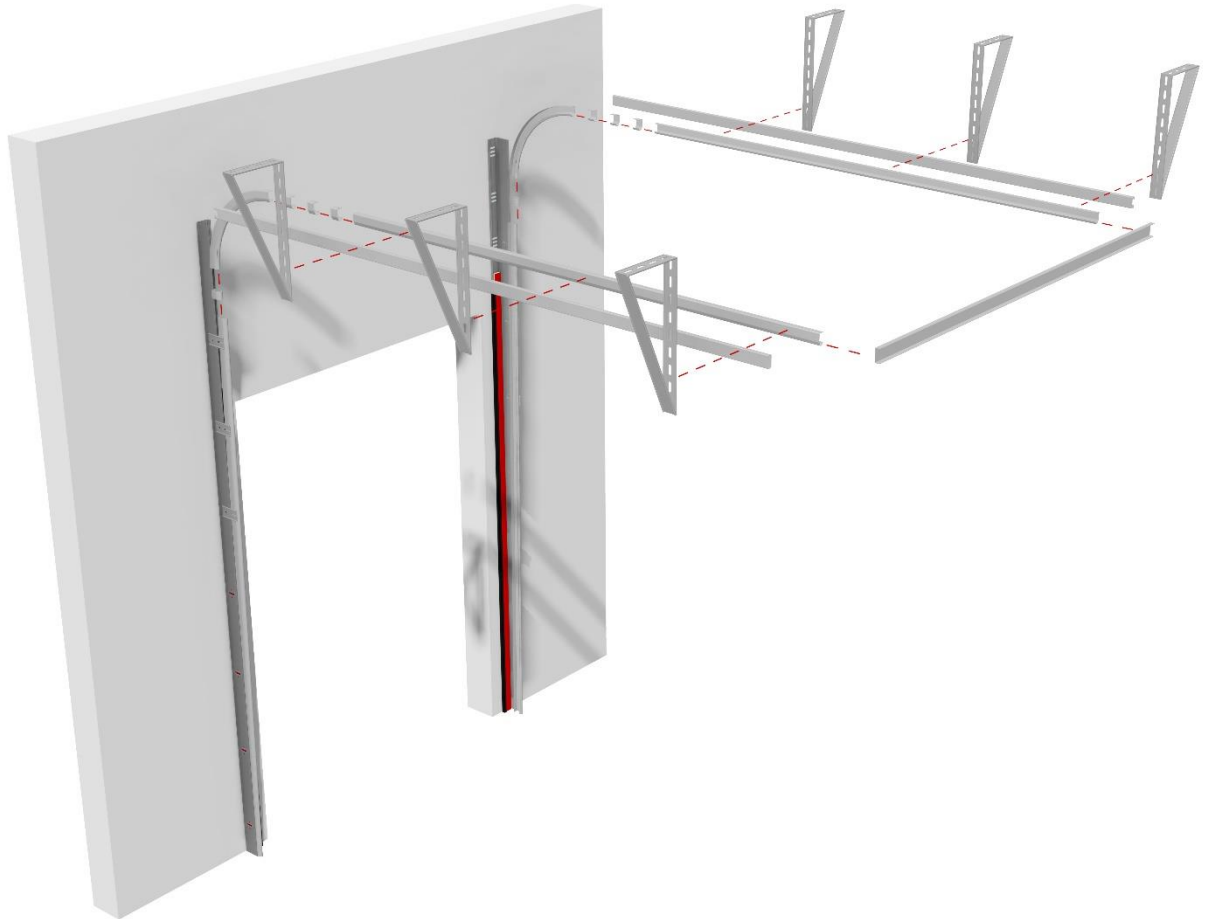
Step 1 - Mounting tracks

Mount the tracks widthwise according to Metacon Installation Drawing. Check the width size. Check that the tracks are mounted parallel and level.



Step 2a - Mounting tracks (horizontal fitting)

Mount the door suspension system. Make sure that the guide pieces are placed perpendicular and parallel. **Mount the spacer at the rear of the horizontal track!**



Property

Step 2b (alternative to 2a) - Mounting tracks (vertical fittings)

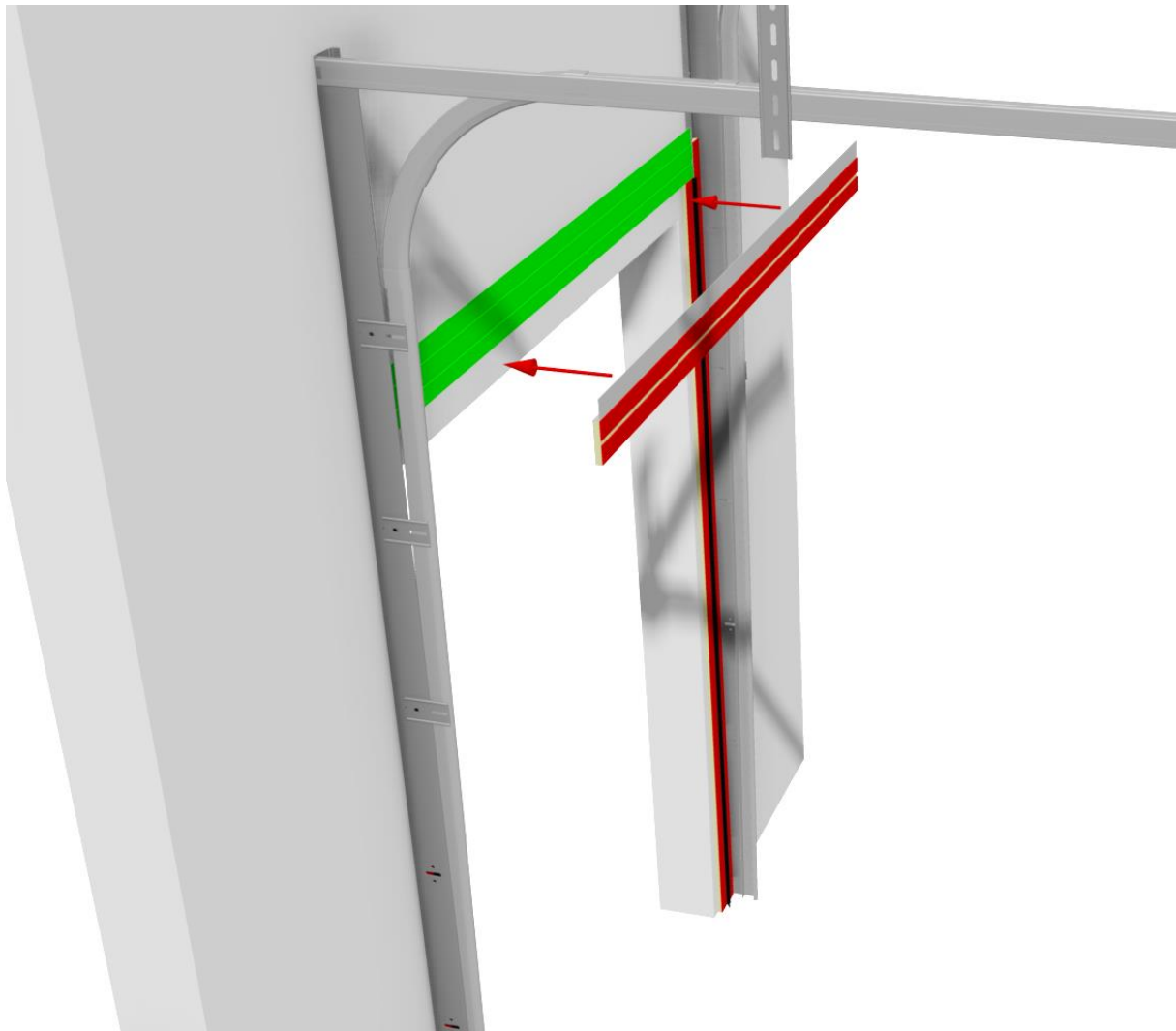
In case of a vertical lifting door mount the upper part of the track. Check that the tracks are mounted parallel and level.



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Step 3 - Mounting wall hook

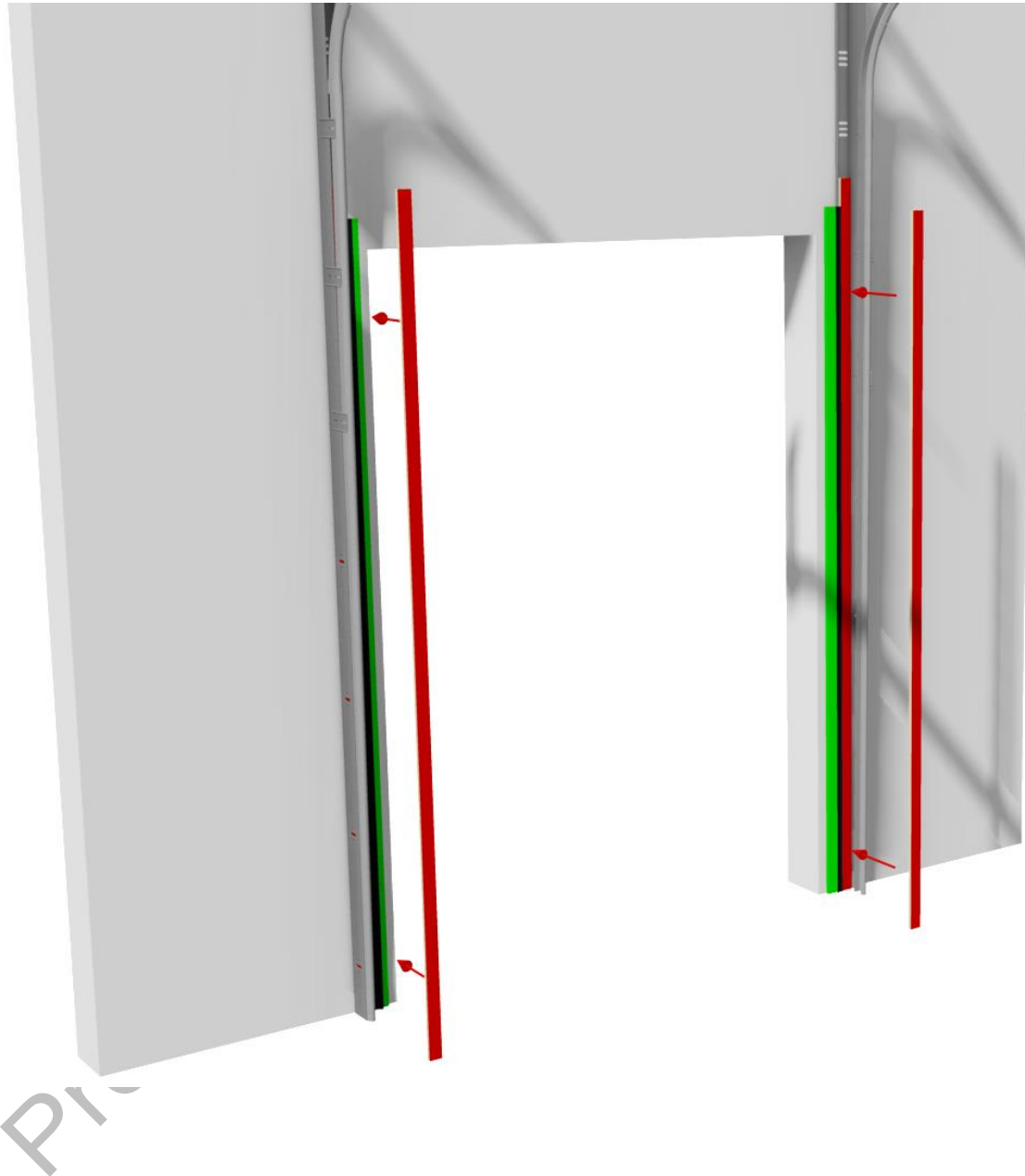
Mount the wall hook at the correct height according to Metacon Installation Drawing. Make sure that the space between the wall hook and the left and right guides is equal.



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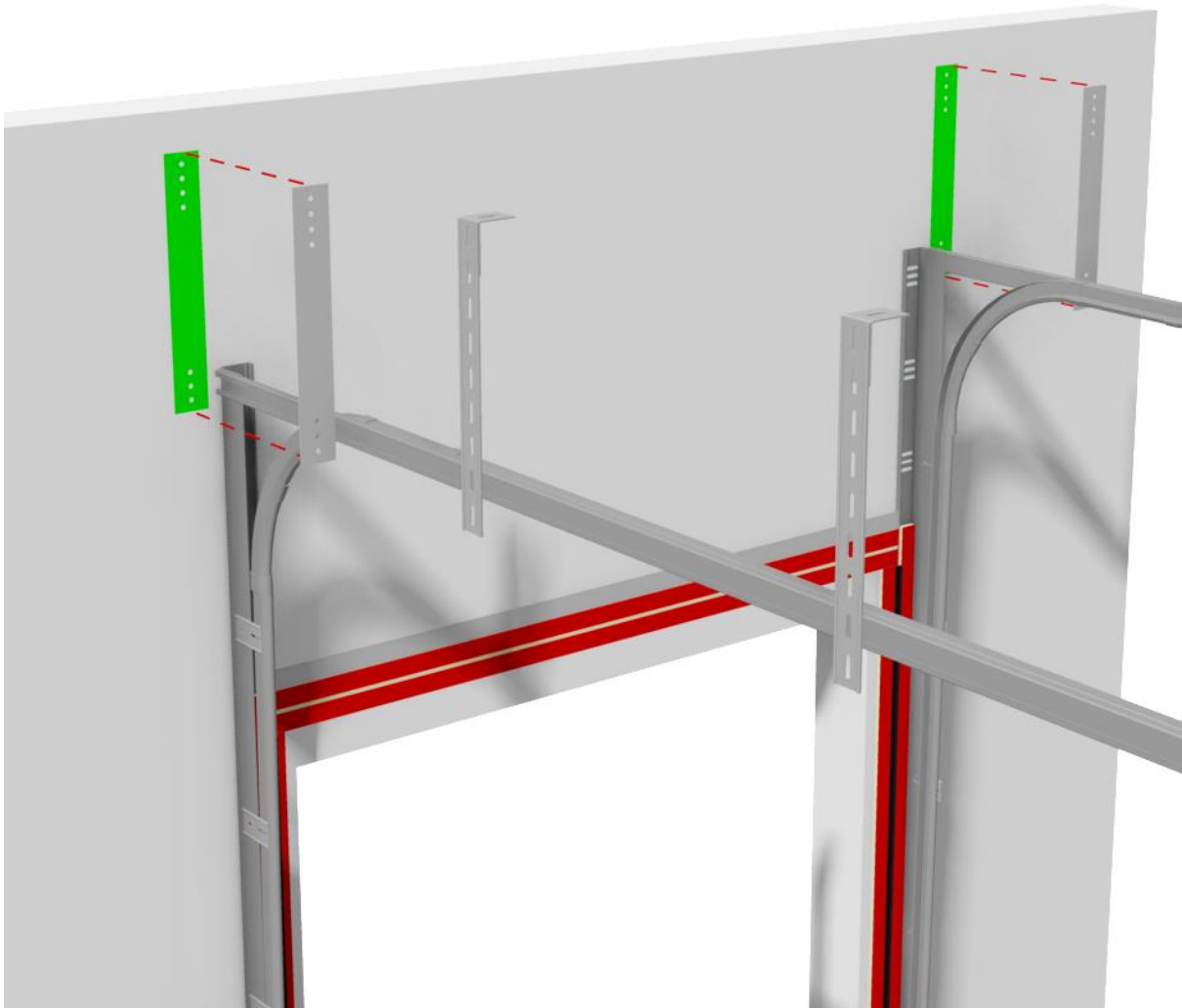
Step 3b - Mounting vertical mazes

Mount the vertical mazes widthwise according to the Metacon Installation Drawing. Check the width size. Check that the vertical mazes are parallel and level.

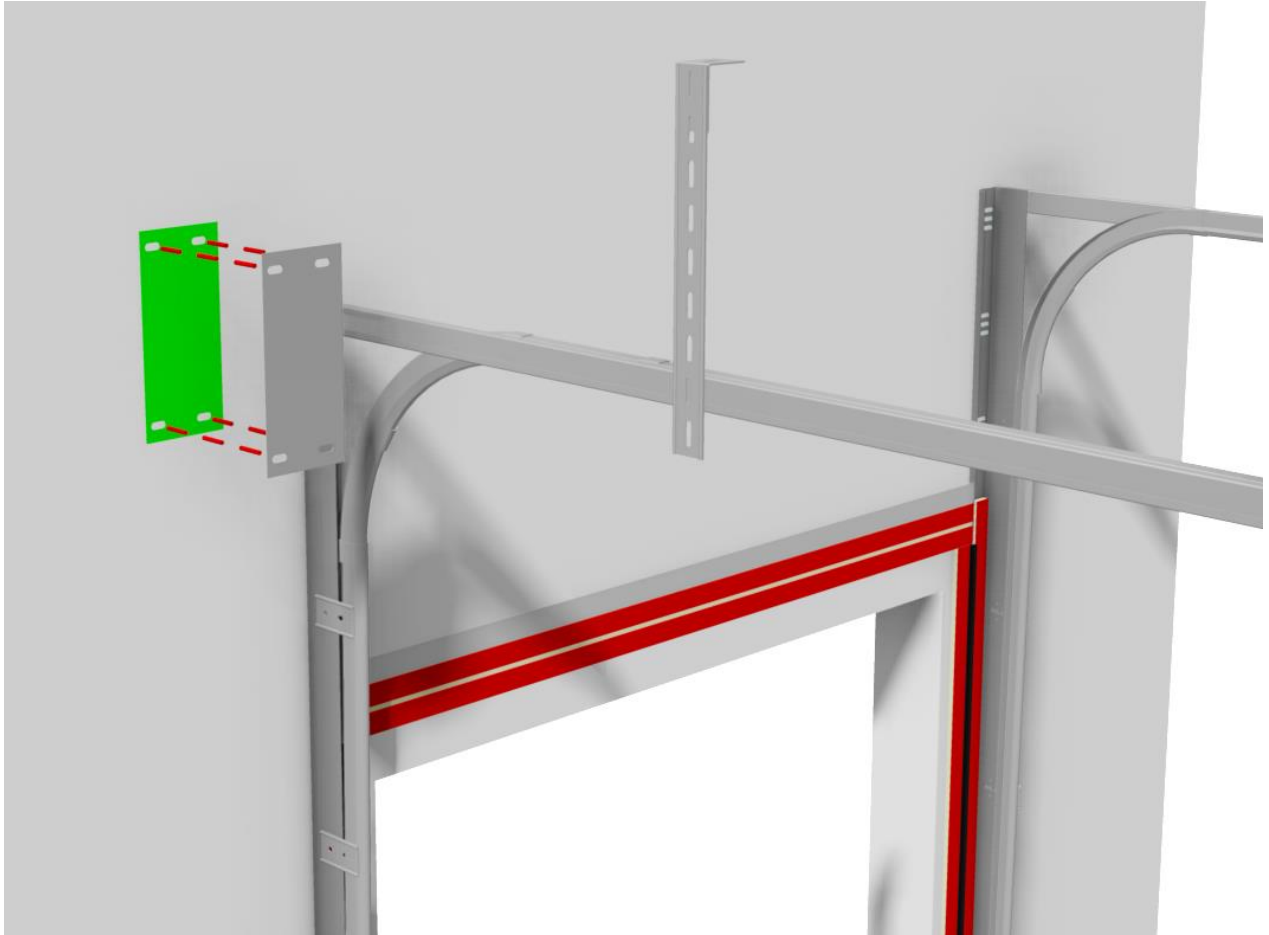


Step 4a - Use of drilling jig consoles & motor slide

Place the drilling jigs according to Metacon Installation Drawing. Check that it is level, mark the hole pattern and remove the drilling jigs. To ensure it is securely fastened, use at least 3 mounting holes per console (2 above and 1 below the horizontal beam). Then drill the holes, taking into account the required distance and depth of the fasteners.



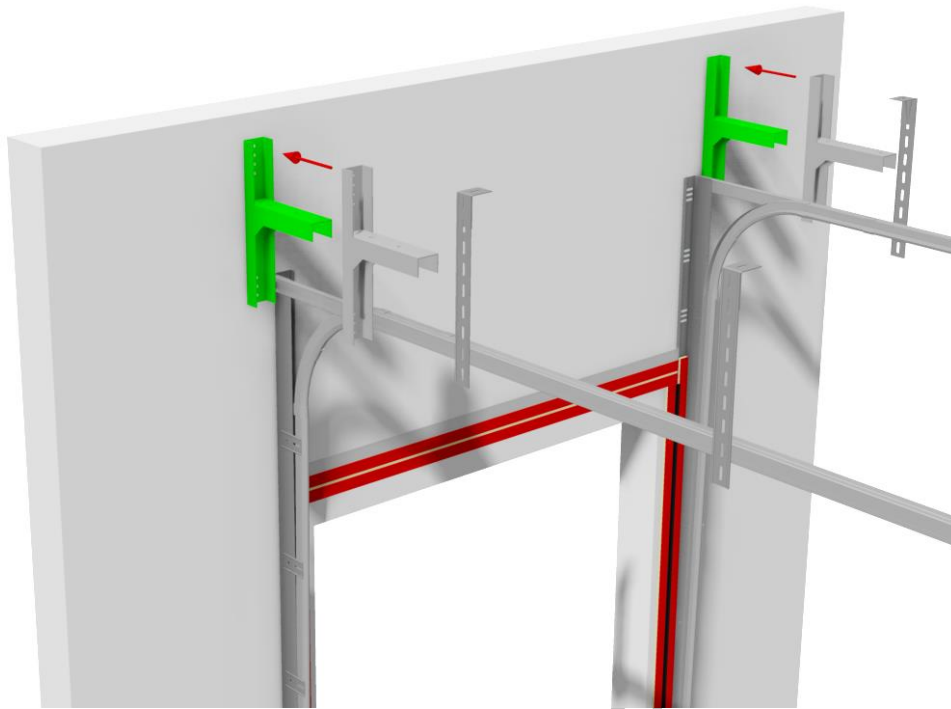
Place the drilling jig for the motor slide as shown below, mark the hole pattern and remove the drilling jig. To ensure it is securely fastened, use all mounting holes. Then drill the holes, taking into account the required distance and depth of the fasteners.



Property ©

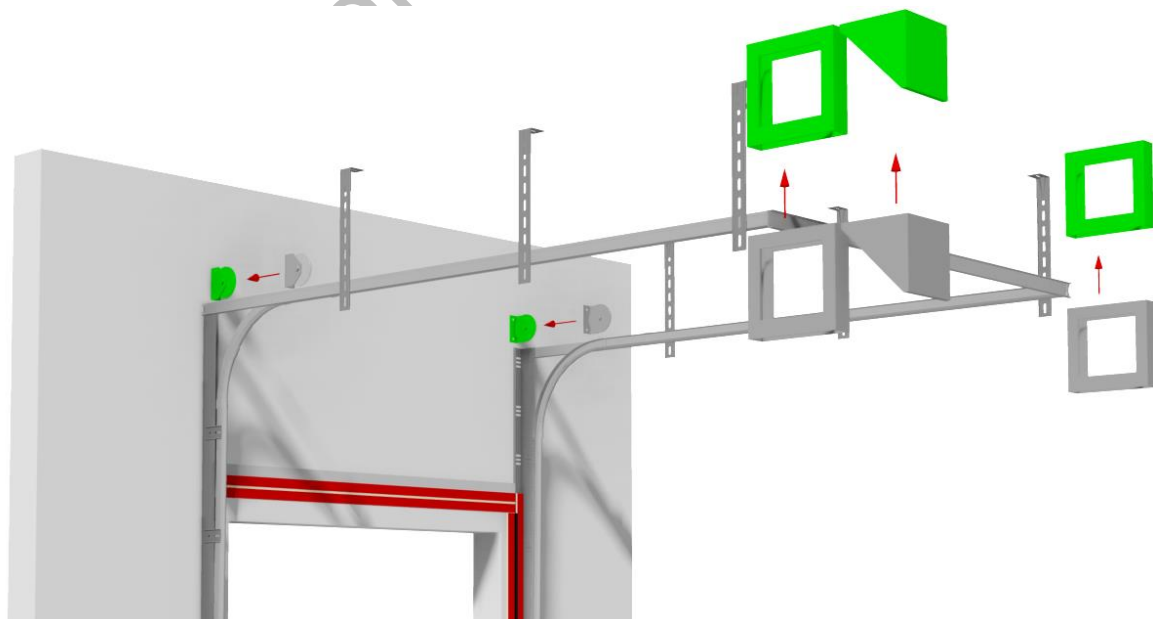
Step 4b - Mounting of consoles (wall mounting)

Mount the consoles according to the Metacon Installation Drawing. Make sure the consoles are level, parallel and perpendicular to the wall.



Step 4c - Mounting consoles (ceiling mounting)

Mount the consoles according to the Metacon Installation Drawing. Make sure the consoles are level, parallel and perpendicular to the wall.



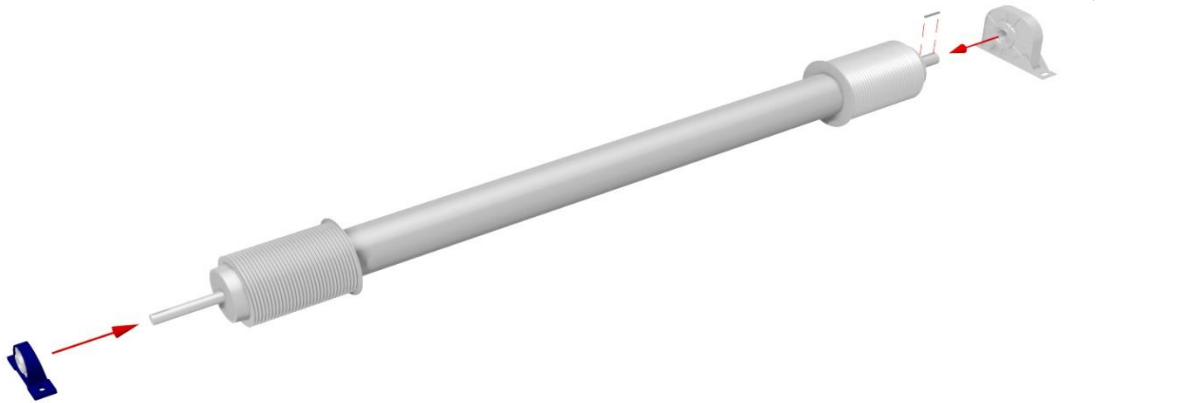
Step 5a - preparation for drive shaft assembly

Degrease and oil the axle journals before mounting the bearings on them.
Slide the safety brake over the axle journal by rotating in the right direction with key.

PLEASE NOTE: Check that the safety brake is not blocked. If it is blocked, it must be unblocked! See safety brake on data sheet for further instructions.

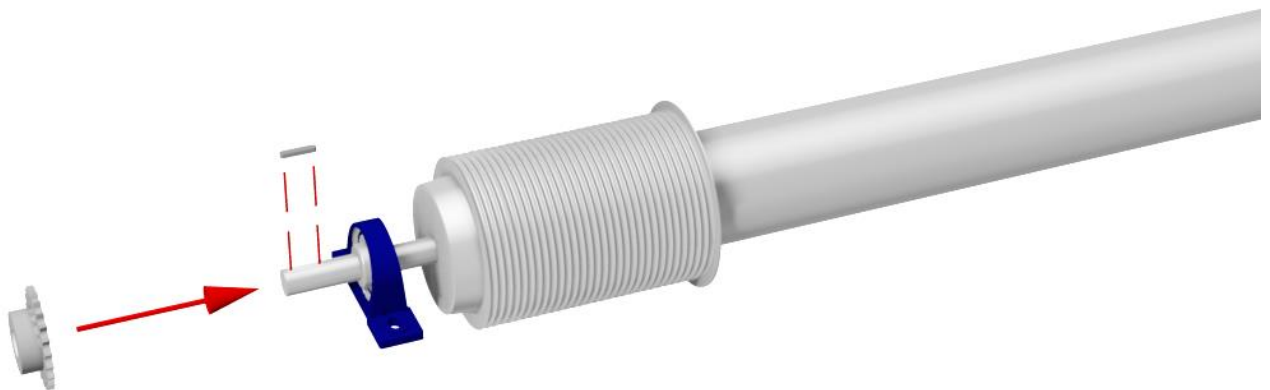
Place the bearing over the axle journal on the other side.
Tighten 1 locking screw of the bearing by hand to prevent it from sliding off.

Note: The figure below refers to a situation where the drive is located on the left.



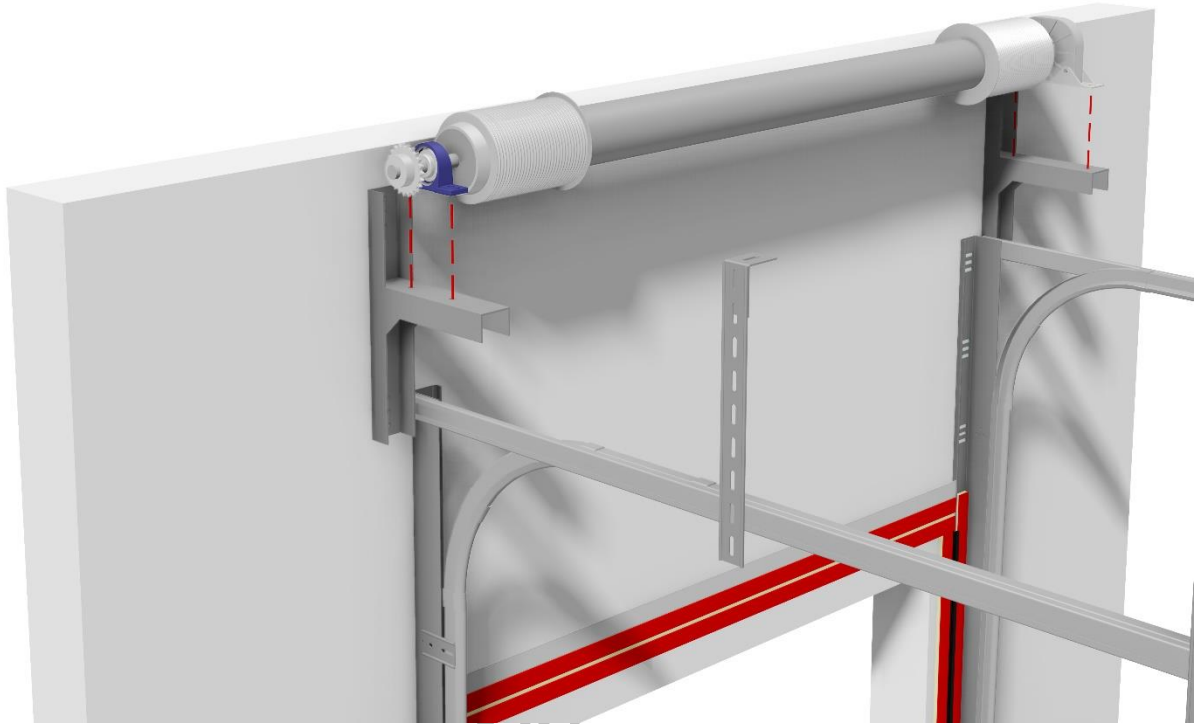
Step 5b: Mount the sprocket

On the motor side, insert the key into the axle journal. Then slide the sprocket on with the hub pointing in the opposite direction of the roll.



Step 5c - Drive shaft assembly

Check that the shaft is mounted parallel to the wall. Make sure that the space between the cable drums and left and right tracks is equal. Tighten the bolts and the locking screws of the bearings.



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Step 5b - Mounting motor slide & chain drive motor

Mount the motor slide.

Check that the housing of the limit switch is in the correct position, it must not be in contact with the chain.

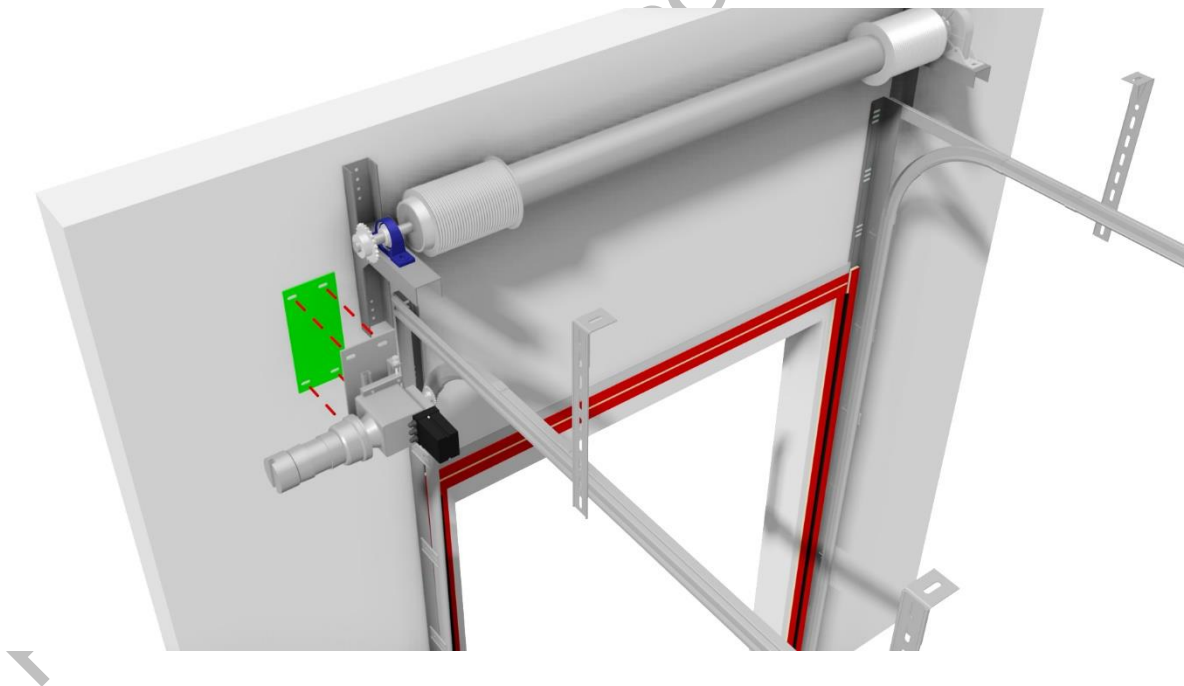
Mount the control box and connect it to the power supply including the battery if included as well as the safety brake.

Please note: any other components may only be connected at step 11 of this manual!

Check that the direction of rotation corresponds to the buttons in the control box at the connection to which the door is to be adjusted.

Place the sprocket on the axle journal, with the hub pointing towards the engine.

The motor can now be mounted on the motor slide with the fasteners (as provided) in the middle position of the range of adjustment of the motor slide. Align sprockets both horizontally and vertically and secure with the locking screws.



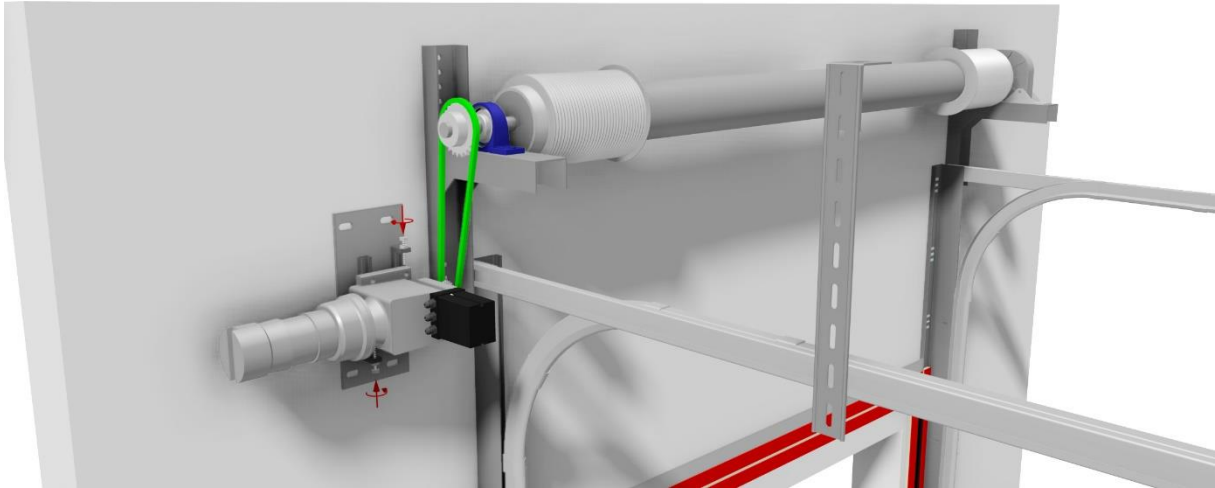
Step 5c - Mounting and tensioning chain

Lay the chain around the sprockets, mark the required length and loosen the chain. Shorten the chain to the required length and lay it around the sprockets using the supplied fasteners.

When tensioning the chain, make sure that it is not too tight.

If the chain tension is insufficient, the safety brake may be activated by the excess of space on the chain.

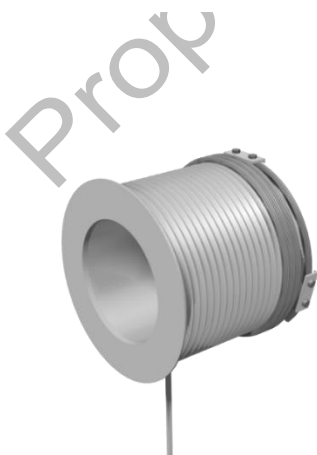
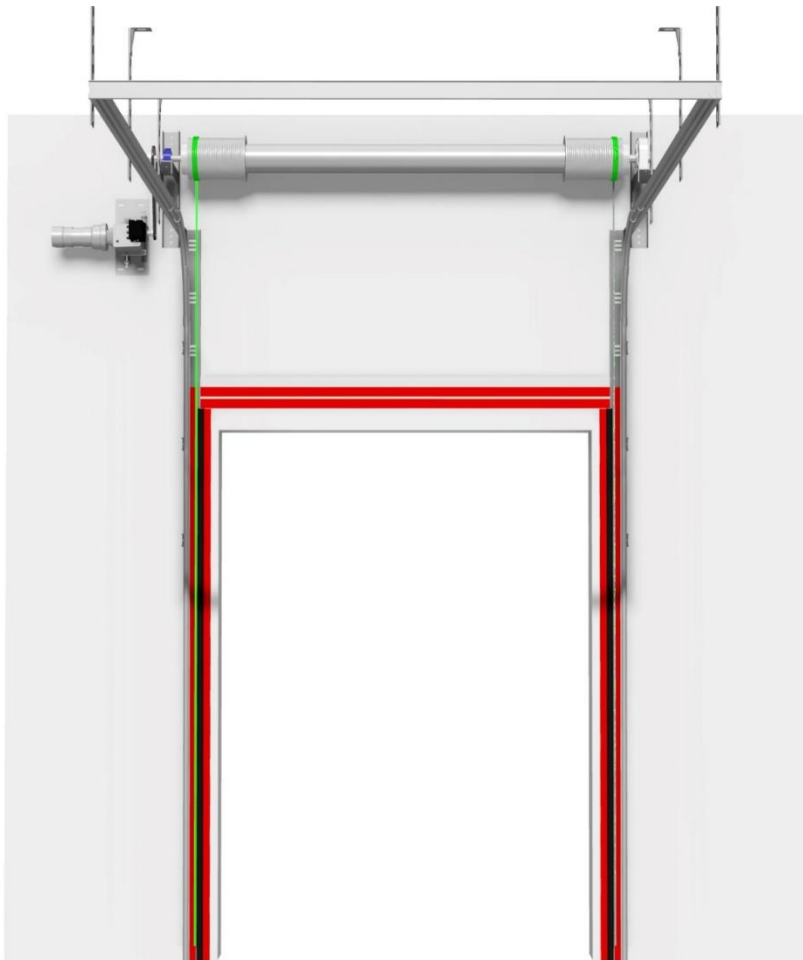
After tensioning the chain, check that the sprockets are still correctly aligned.



Property of Metacon

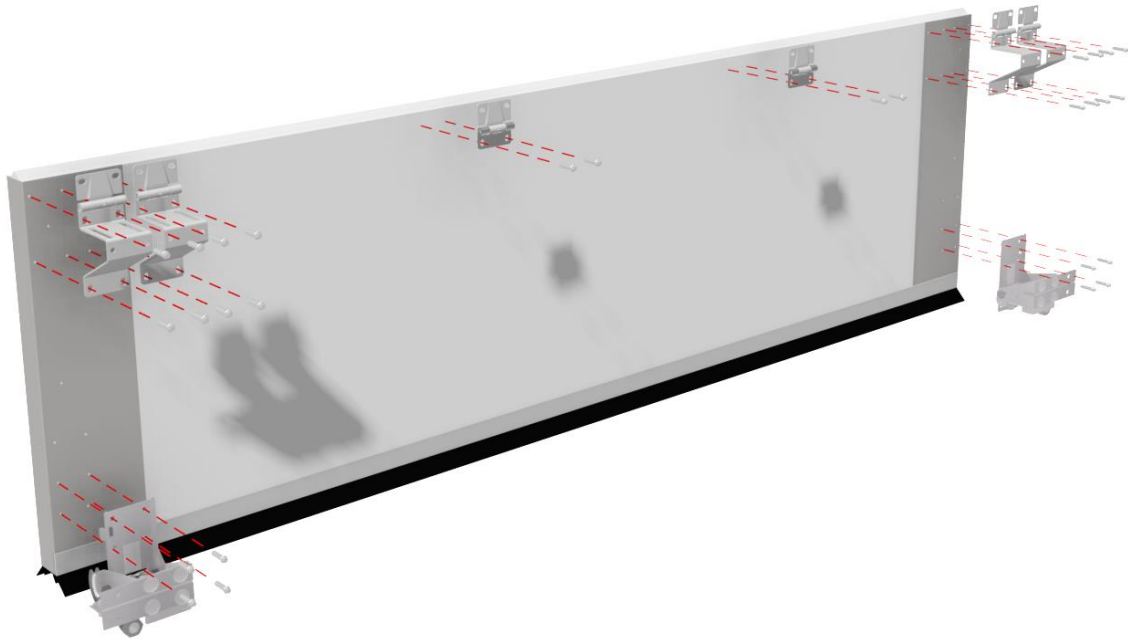
Step 6 - Fixing wire ropes

Attach the cables to the cable drums. Make sure that the cables are wound around the drums with at least 2 complete revolutions when the cables are fully suspended. There must be between 1 and 3 mm of space between the cables and the tracks. The lowered cables must have the same length on both sides. Please note: The cable must be fastened to the cable drum with at least 2 clamps.



Step 7a - Mounting the bottom panel

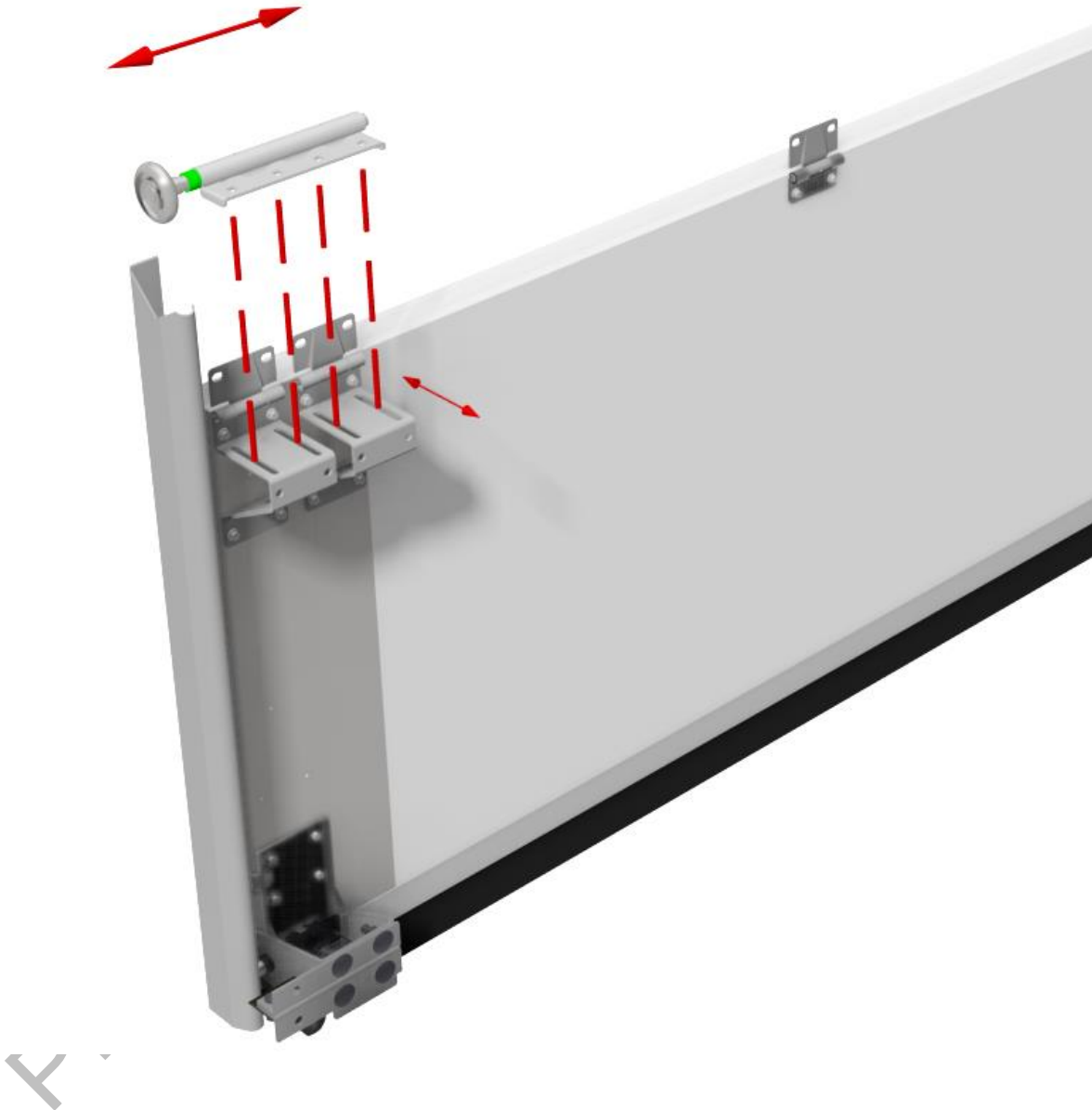
Mount the side hinges as shown in the illustration below using the fasteners provided. Place the bottom panel between the tracks. Make sure that the distance between the tracks is equal on both sides. Mount the cable break protection including roller as shown in the illustration below using the supplied fasteners. Check that all prepared mounting holes have been used.



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Step 7b - Mounting rollers

Mount the rollers on the side hinges. Use the bushings to prevent the panel from moving more than 3 mm.

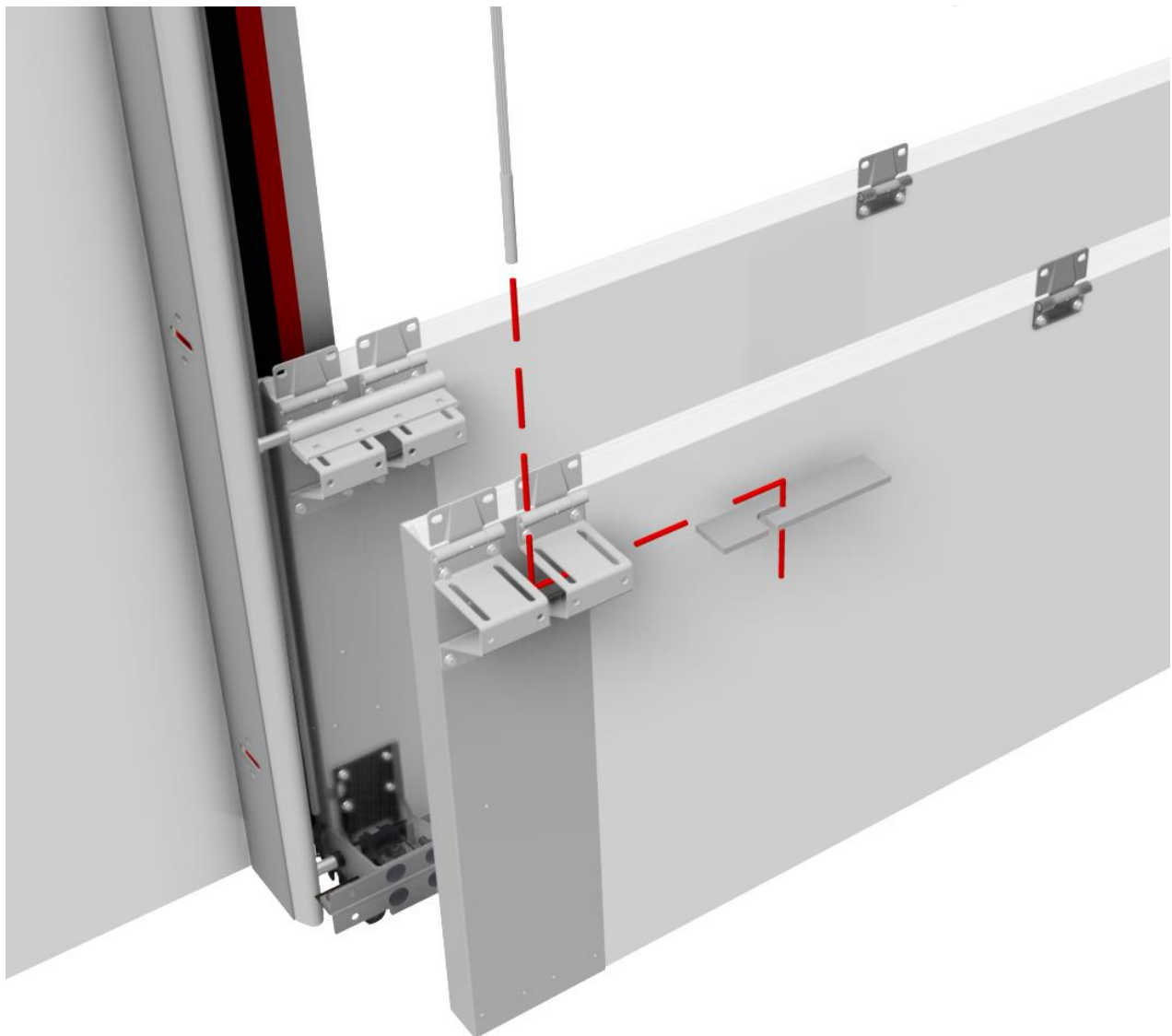


Step 8a - Mounting intermediate panels

Mount the side hinges as shown in the illustration below using the fasteners provided. Place the intermediate panel in front of the daylight opening.

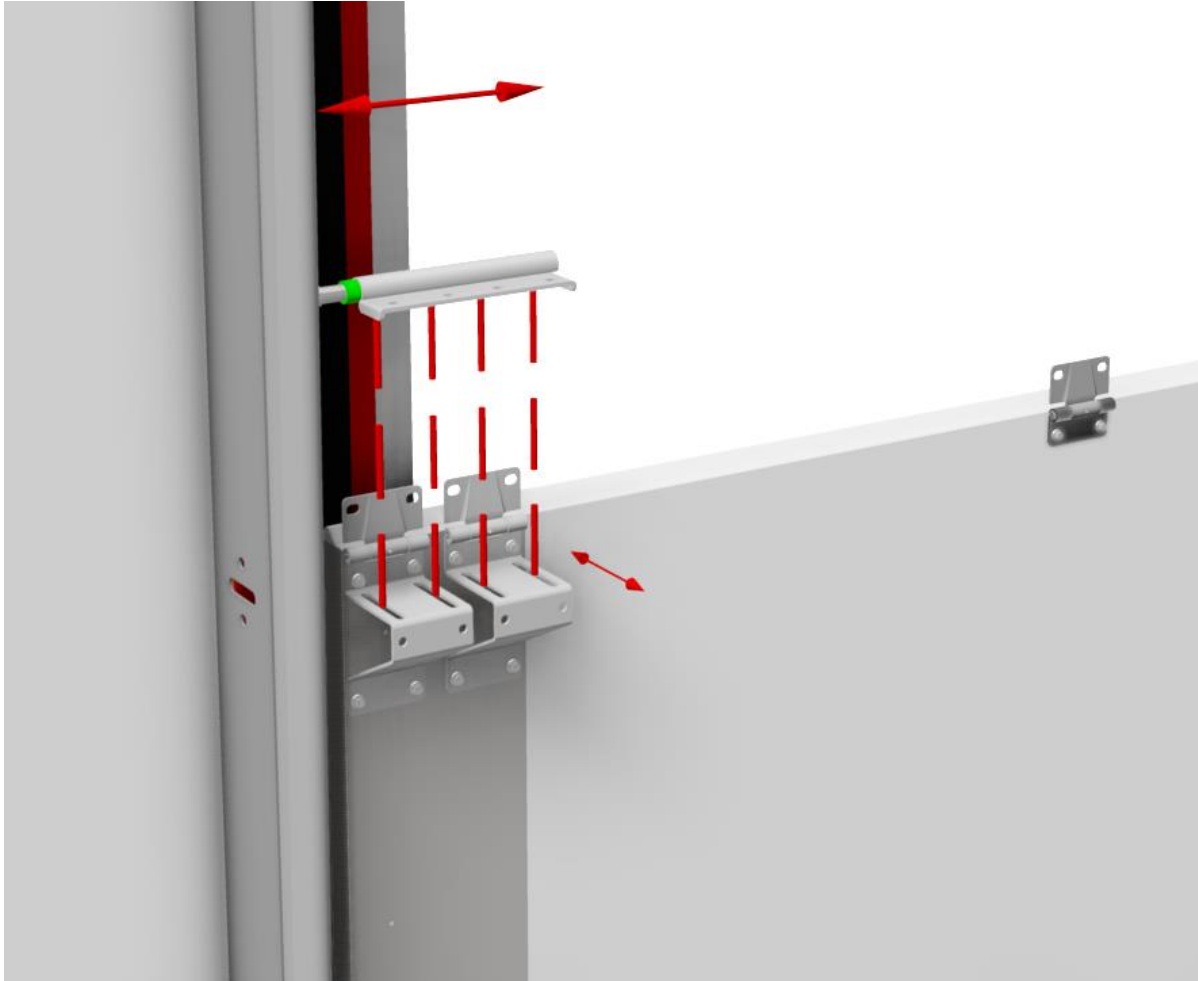
Use the supplied lifting bracket together with the wire ropes to stack the panels without the use of external lifting equipment.

Then place the intermediate panel on the underlying panel, making sure that the distances to the left and right are equal.



Step 8b - Assembly of side hinges and rollers

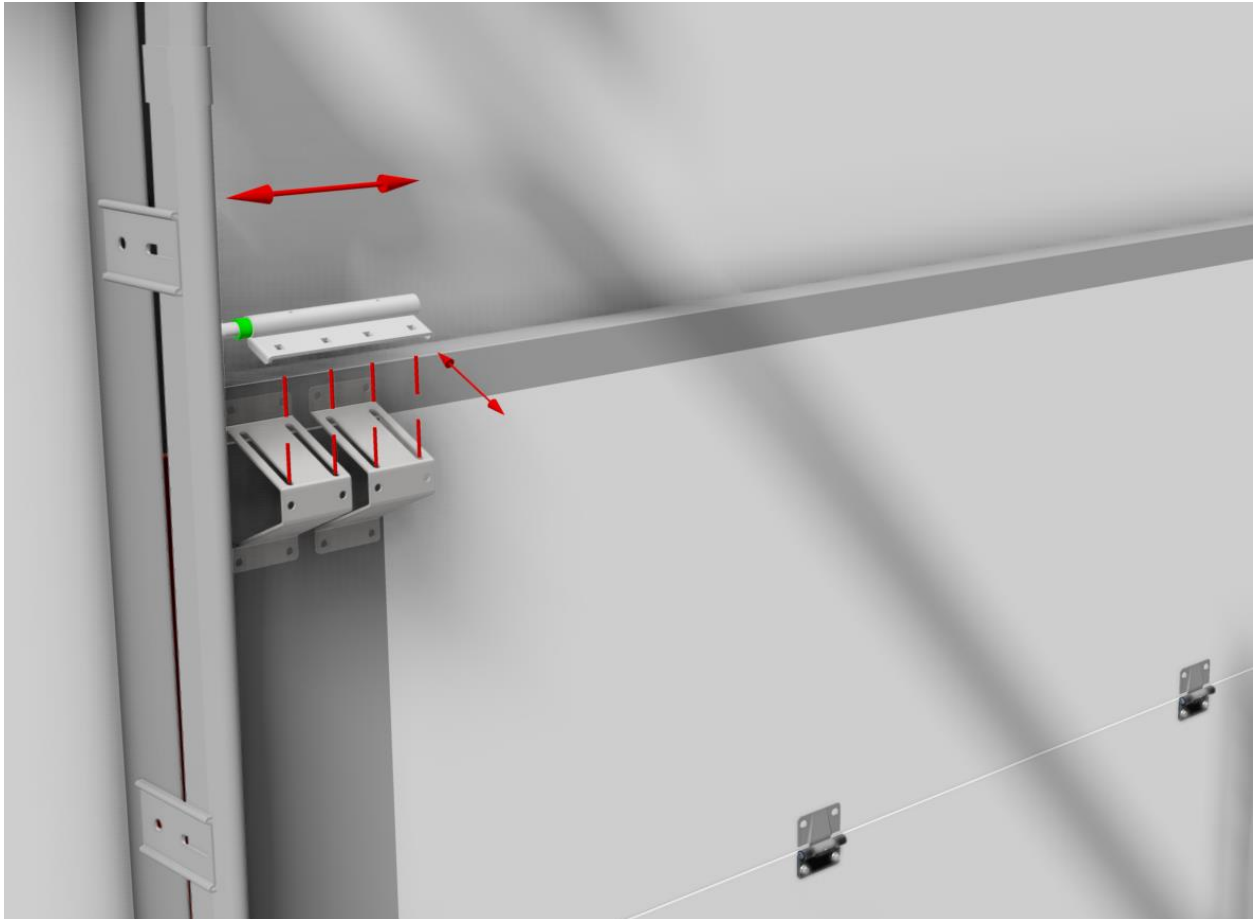
Mount the rollers on the side hinges. Fasten the side hinges of the underlying panel with the screws provided.



Repeat this step until all intermediate panels are in place.

Step 8d - Mounting top panel

Mount the top roller brackets as shown in the illustration below using the fasteners supplied. Mount the rollers of the top panel on the top roller brackets. Use the bushings provided to prevent the panel from moving more than 3 mm. Fasten the hinges of the last intermediate panel to the top panel.



Property

Step 9 - Mounting the centre hinges

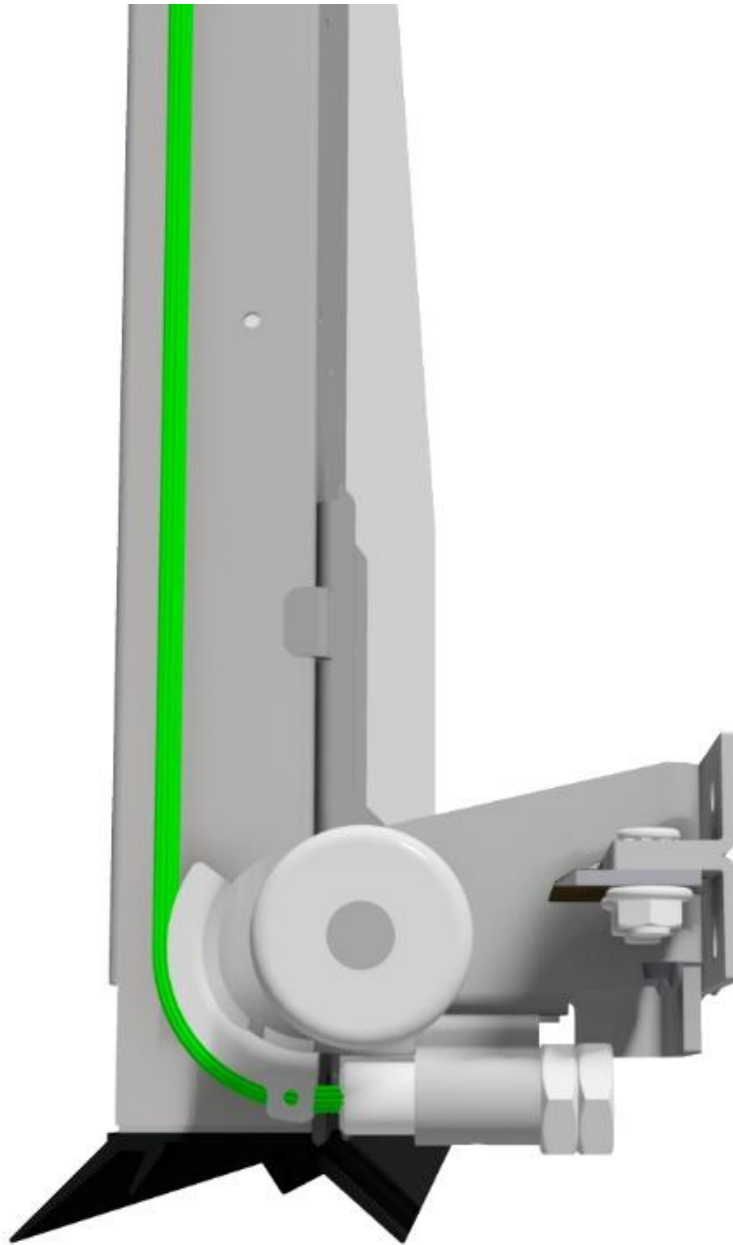
Fasten all centre hinges using the fasteners provided.

PLEASE NOTE: Do not drill but place directly in the middle of the hole with a maximum torque of 4 Nm.



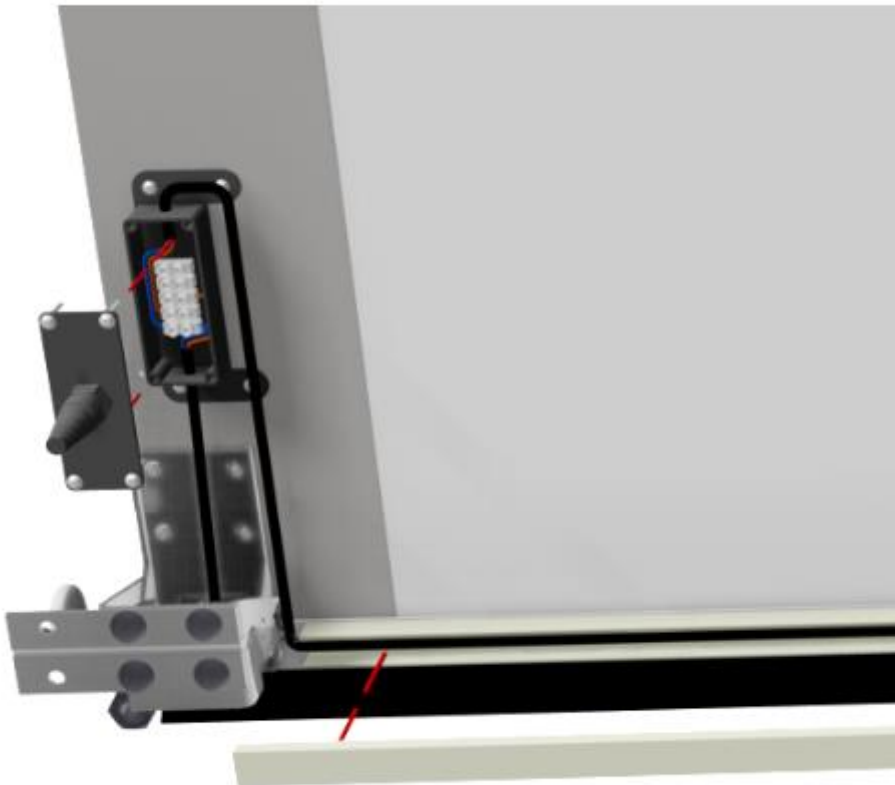
Step 10 - Mounting wire rope

Attach the cables to the cable break protection according to the figure below.
MAKE SURE that the locking device is removed.



Step 11 - Connecting slack cable safety switches

Guide through cable duct lower panel to LAD 2.



Step 12 - Adjusting end positions

Attention: the push buttons in the control box override all fuses and limit switches!

First of all, lift the overhead door before you start setting the limit switches.

This is to make sure that the safety brake is not blocking the door.

See the supplier's manual for instructions on setting the end positions.

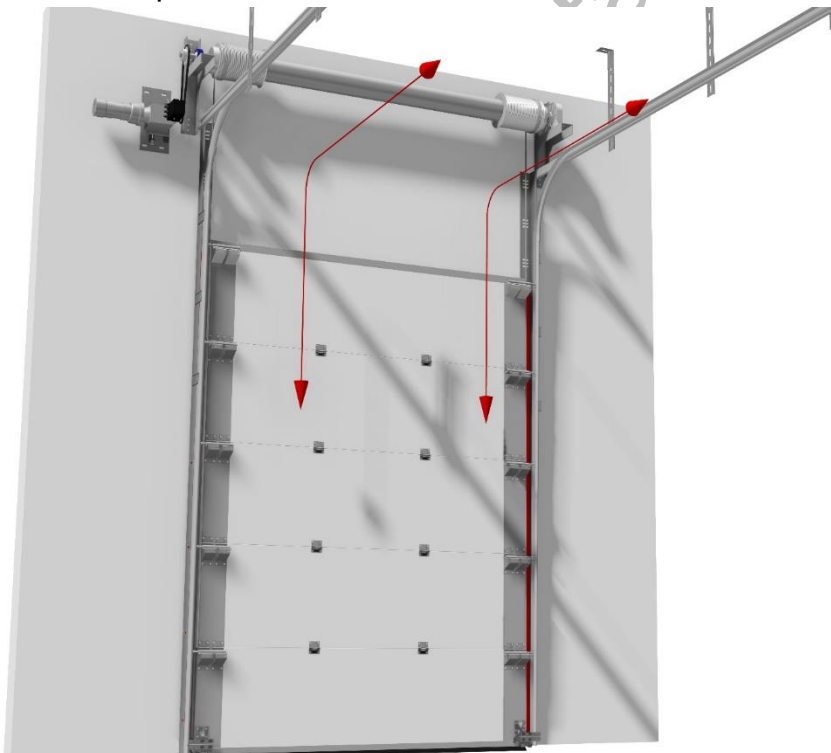
For normal operation, the standard limit switches are set. When setting the end position below, the door leaf must not hang on the wall hook.

When closing during an emergency, the overhead door must extend to the overclose limit switch, for additional information see the manual of the supplier of the control box.

Mount the control box at the height shown in the drawing, disconnect the cabling and secure it to prevent cabling getting between the moving parts.

After testing and adjusting the limit switch positions, you can proceed to connecting and self-learning of any components and safety devices supplied. Connect 1 component, test it for correct operation.

Then connect and check the next component for proper operation, repeat this until all components are connected and tested.



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).

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Appendix A: "OHD-C EI(1) 60 / EI(2) 90 / EW 90 & OHD-C EI(1) 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: "OHD-C EI(1) 60 / EI(2) 90 / EW 90 & OHD-C EI(1) 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;

	Lowered batter		Standard / highlift hardware		Vertical hardware	
	cycles	year	cycles	year	cycles	year
Replaced after;						
Turning wheels	5000	10	nvt	nvt	nvt	nvt
Running wheels bottom panel	10000	10	10000	10	10000	10
Running wheels top panel	10000	10	12500	10	12500	10
Running wheels middle panel	25000	10	25000	10	25000	10
Steel cables	5000	5	12500	5	12500	5
Hinges/side brackets	25000	10	25000	10	100000	10
Palusol	25000	20	25000	20	25000	20
Duoflap (smoke doors)	1000	3	1000	3	1000	3
Rubber liquid barrier	1000	3	1000	3	1000	3

Appendix C: " OHD-C EI(1) 60 / EI(2) 90 / EW 90 & OHD-C EI(1) 120 - Maintenance Log"

Door checked*	Parts replaced	Comments / recommendations	Technician name	Date	Signature

* According to Chapter 10 of the operating manual