

Installation Manual

Metaflex Medicare EI1 2.0

202571

Metaflex. Meet reliability.

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1. Foreword

This manual describes the assembly of a Metaflex Medicare E11 sliding door. The information in this manual is important for the good and safe functioning of the door system. Read this user manual thoroughly from cover to cover. Metaflex Doors Europe (MDE) urges that all new users (operators, installers, maintenance staff and where applicable cleaning staff) should receive training, for which this user manual may serve as a basis.

MDE advises that the original copy, including its attachments, should be stored in a safe, central place. Another copy of this manual should be stored close to the apparatus in the workspace.

The assembly instructions are intended for technical personnel.

The maintenance instructions assume that the maintenance staff have been authorized by Metaflex Doors Europe.



This warning sign indicates points which require special attention during installation.

2. Specifications

Product description

Serial number: Indicated on the component ID label

Variants: Metaflex E11 frame

Areas of application

Healthcare facilities, hospitals, pharmaceutical.

Dimensions

Variable clear opening width x clear opening height, up to a maximum of 2000 x 2700 mm.

Lifespan

10 years when maintained according to Metaflex Doors Europe's maintenance guidelines.

Weight

The weight of a Medicare E11 2.0 door system depends on the clear width and height. The maximum weight of the door leaf is 320 kilograms.

Assembly options

Panel wall (through the wall), provided they are suitable for carrying the weight of the door.

3. Safety guidelines

General guidelines

1. Always wear dry work clothes and safety shoes.
2. Work may only be carried out if the local legal regulations are observed.
3. Always switch the circuit breaker/power supply off and place warning signs when carrying out work so that the door cannot be operated.
4. Before starting, check that the on/off switch is switched to the 'OFF' position. Only insert the plug once assembly has been completed.
5. Ensure that fingers do not become trapped, especially:
 - During installation/adjustment of the guide rollers.
 - When installing/adjusting the toothed belt of the motor/return pulley.
 - Between the end stop and the door.
 - Between the rollers and the rail.
 - Between the frame and flush handle on the inner side of the door leaf.
6. Use only original components and accessories.
7. Do not alter the way in which the door is constructed or controlled. If done so, the manufacturer warranty will be void. All claims on the warranty due to the failure at the consumer unit will be rejected.



Incorrect setting of the opening direction has a consequence on the safety systems. The changing of parameters concerning DIN direction and automation type can lead to improper functioning of the automation and/or the door and may cause damage.

Safety in special situations

Take extra safety precautions in all settings, for example in surroundings where people are unaware of the risks of becoming trapped. In order to prevent this, the following facilities are available:

- Radar and/or a light curtain detecting the opening.
- Light curtain sensor detecting the door when operating.
- Screening off of the area in which the door operates.

4. Transport and storage

Transport

Metaflex Doors takes care when packing the products. The door (system) and/or automation are shipped in crates or on pallets. During transport, no other goods may be stacked on the Metaflex packaging. Be careful not to shake the packaging.




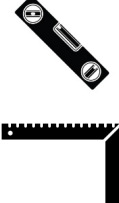











Storage

The door (systems) and/or automation should be stored in their original packaging in a dry and frost-free environment until installation.

5. Fastening materials

202569	Assembly kit frame EI1 2.0
200234	Assembly kit MF5 rail
VMF10063	Guiding roller set medical grounding
200235	Assembly kit MF5 hook lock

6. Tools required

				
				
 Ø 5.3 Ø 7.8	 TX-40	 3/8", 13mm	 PH2	 S13 / S17

7. Necessary PPE

Ensure to proceed with installation wearing specialized safety clothing/equipment.



Safety goggles



Helmet



Hearing protection



Safety shoes



Gloves

8. Installation steps



Follow the described sequence and, if in doubt, contact Metaflex Doors Europe to clarify. **DO NOT IMPROVISE** as the doors have to be assembled according to certified guidelines.

8.1 Dimension check

Check the dimensions and proceed.



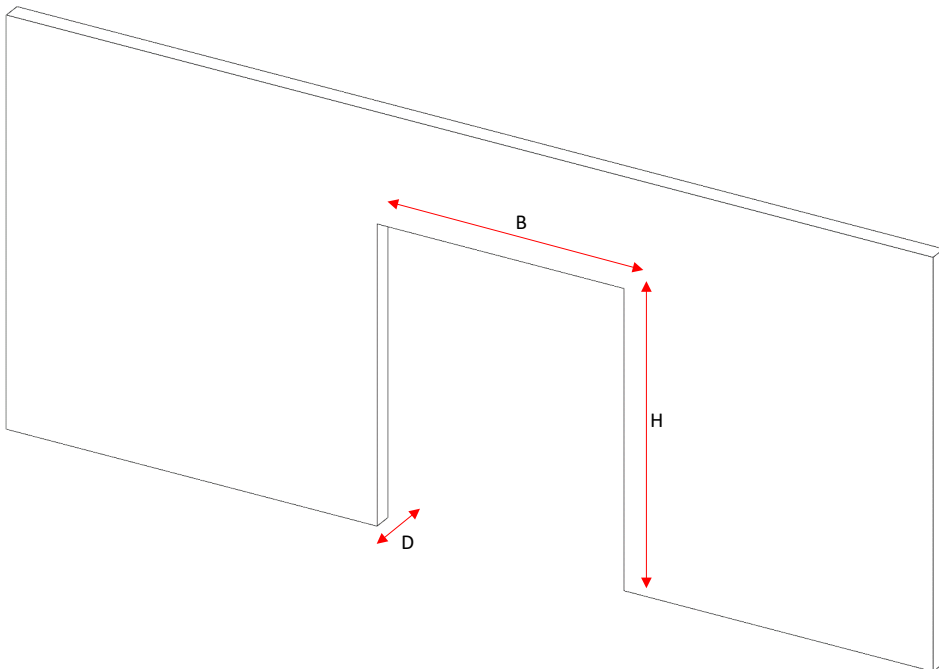
Check the width (B), the height (H) and the wall thickness (D) of the door opening with floor plan. Clear opening data available on customer drawing.

B = Clear opening width

H = Clear opening height

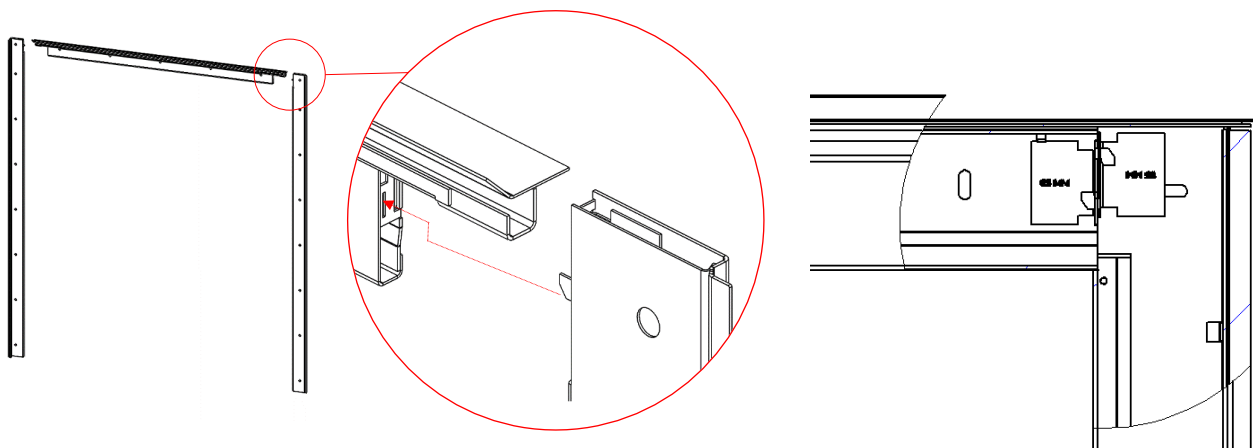
D = Wall thickness

Check if the finished floor and walls are level and straight. Maximum tolerances ± 2 mm.

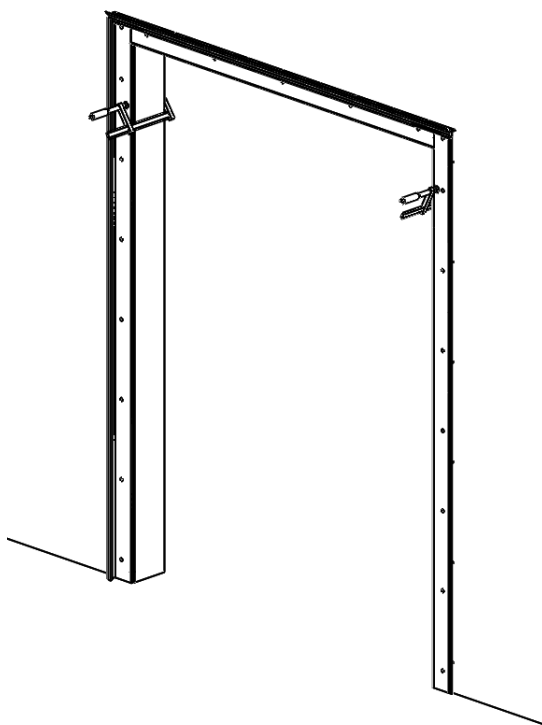


8.2 Frame assembly

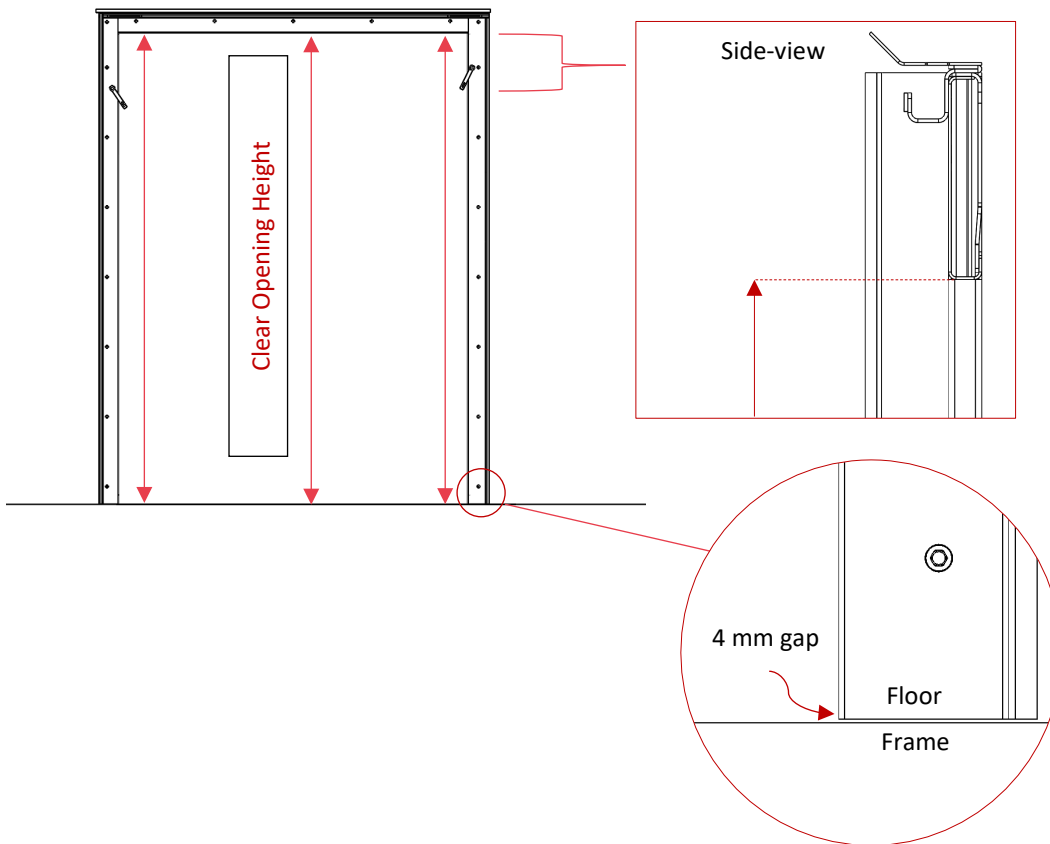
Step 1: Align the 3 frame components (left, right and top) and connect to each other using the click-in construction as shown below.



Step 2: Once the frame components are connected, align the frame around the wall opening and temporary fixate the frame with the help of bar clamps. Make sure that the bar clamps have soft clamping surfaces that prevent damaging the door frame and/or the finished wall. Use a spirit level to check all frame components are installed correctly.



Step 3: Measure the distance from the finished floor level to the inside frame height at the 3 points (see image below). This distance must be "Clear Opening Height". Make sure all three positions are within tolerance by adjusting the frame along the wall. In the ideal situation, the wall frame should be 4 mm free from the finished floor level.

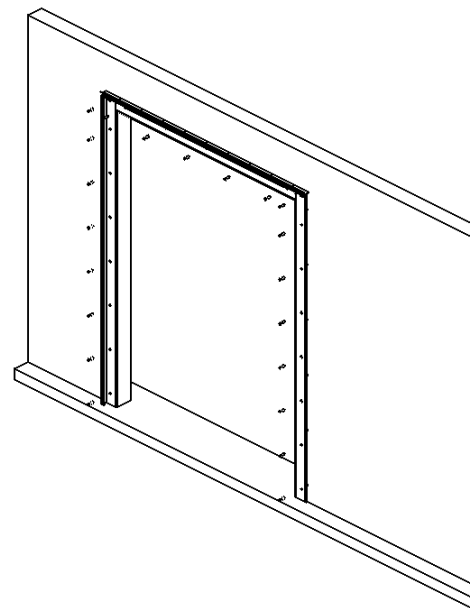


Step 4: Pre-drill the holes before installing the screws with drill \varnothing 5.3 mm.

Fix the frame to the wall using screws (6,5 x 50 mm self-tapping screw). Make sure the base of the frame is free from the finished floor level.

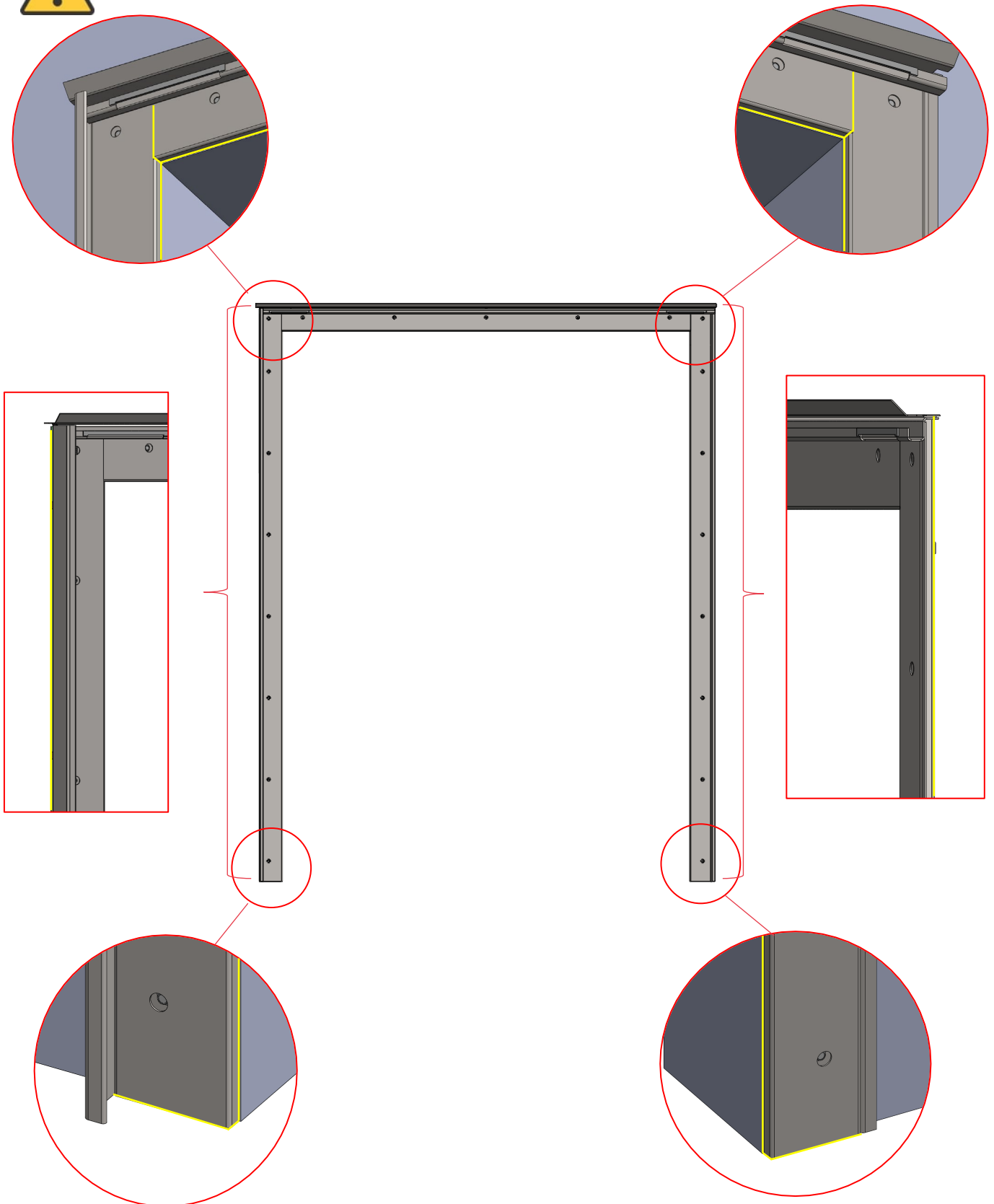
Tool: 3/8" Hexagon socket

► **In case of medical grounding:** Slide the plastic covers over the mounting screws. After securing the frame, measure whether the frame is grounded.



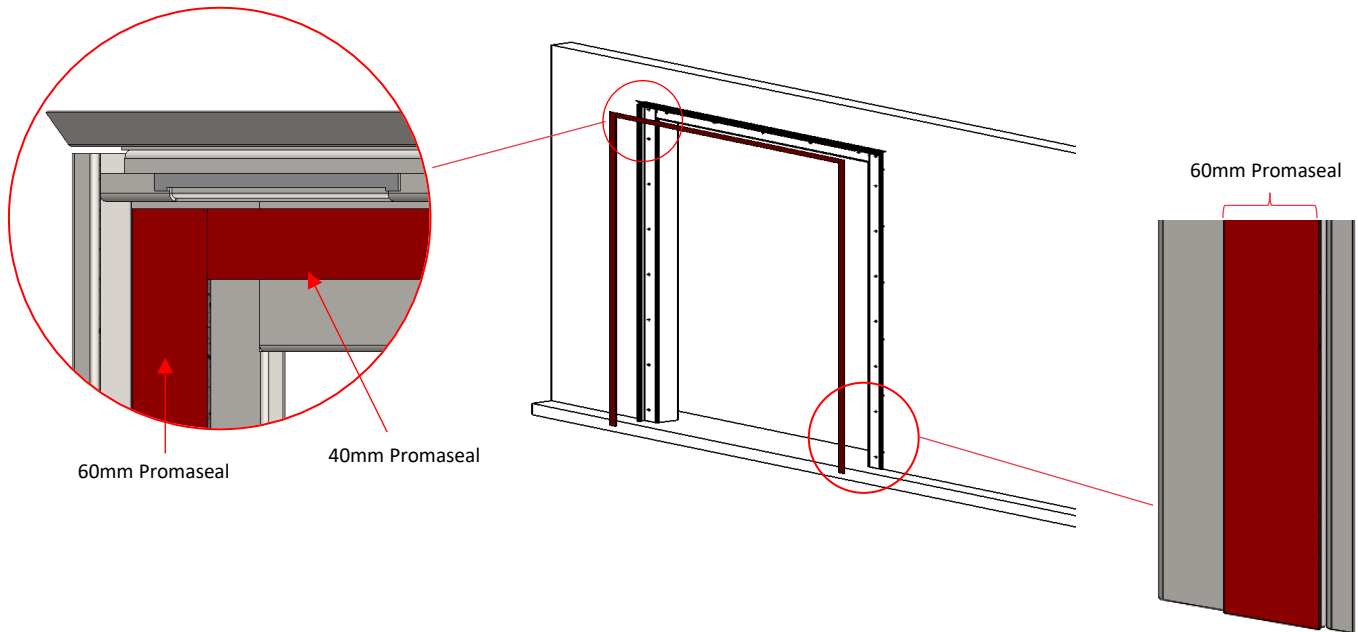


Step 5: Using the silicone sealant from assembly kit 202569, surrounding (path along yellow highlight) the frame, seal both inside and outside to make it **airtight and smoke resistance**.



Step 6: Attach the Promaseal on the frame. Cut the Promaseal strips to the according sizes. The strips have a maximum length of 2150 mm. Therefore, devide one 60 mm strip in length over the two lateral frame parts. Start fixating the lateral strips from the top, so that the seam between the strips is not at visual height.

- The vertical strips (60 mm wide) should be taped approximately 40 mm from the inside of the frame edge.
- Horizontal strip (40 mm wide) should be level with the top labyrinth as shown in the following figure.

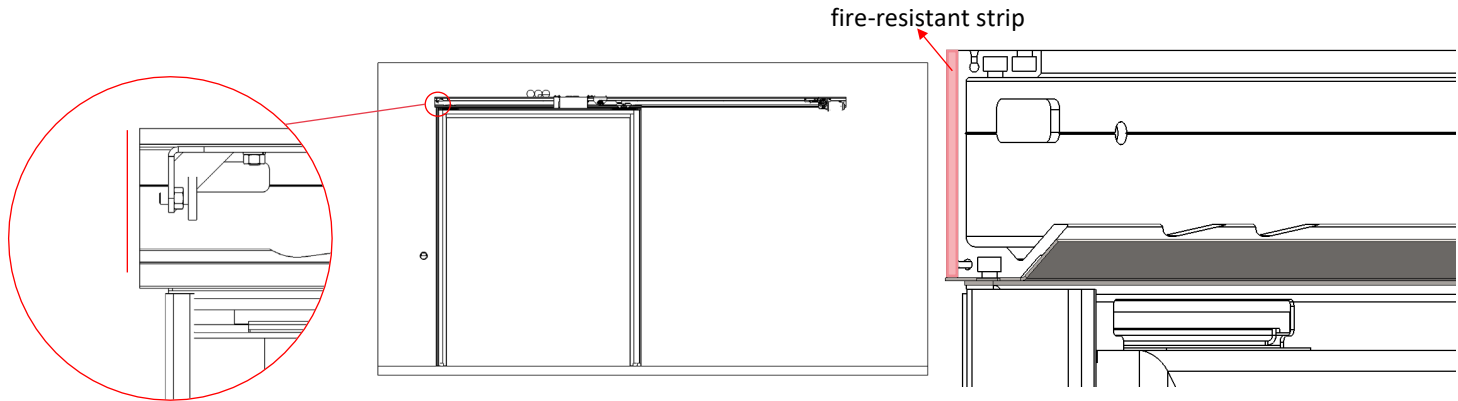


8.3 Rail system installation

ATTENTION: PLEASE USE CAUTION WHEN INSTALLING. FALL HAZARD!



Step 1: Ensure that the fire-resistant strip is mounted behind the rail, should be already attached to create an offset of 6 mm between wall and rail. Rest the rail on top of the wall frame (rail support profile), and align it with the rail support profile on the opener side.



Step 2: Use the holes in the rail as a reference for drill point coordinates.

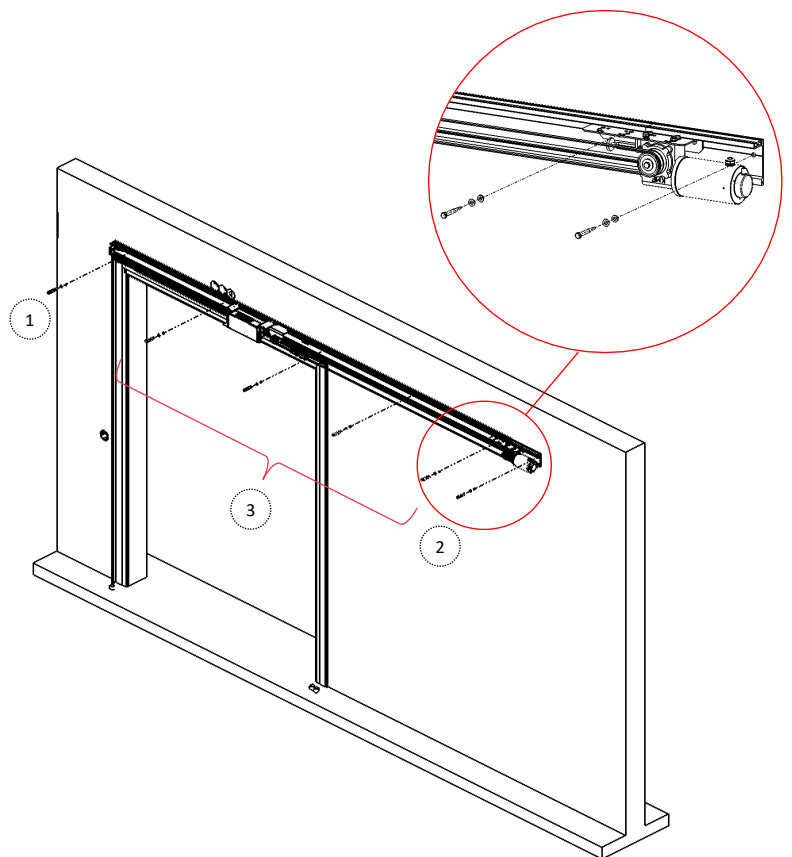
Before marking any hole points, use a spirit level to check if the rail is horizontally levelled.



1. Secure the rail to the first hole at opening side using bolts from assembly kit 200234. Use plastic bushes over the mounting screws if the door system must be set up grounded medically.
2. Keep the rail level and secure the end of the rail.
3. Mount the remaining bolts to secure the rail.

Tool: 13mm Hexagon socket wrench

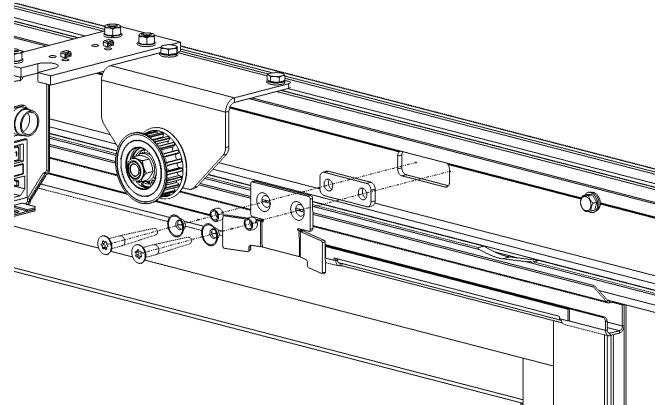
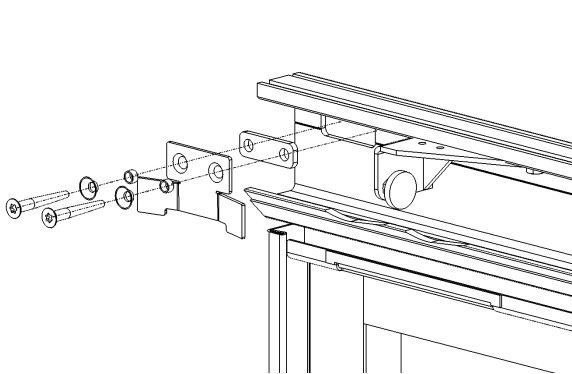
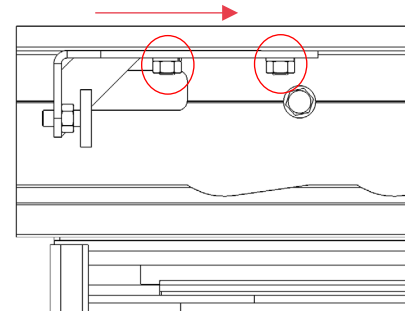
► **In case of medical grounding:** Use plastic covers over the mounting screws if the door system must be set up grounded medically.



Step 3: Unthighten the two bolts of the endstop at the opening side and slide the endstop near the clear opening. Correctly install both fire hooks to the wall through the rail using the self-tapping screws. All the required fastening material are in assembly kit number 200235.

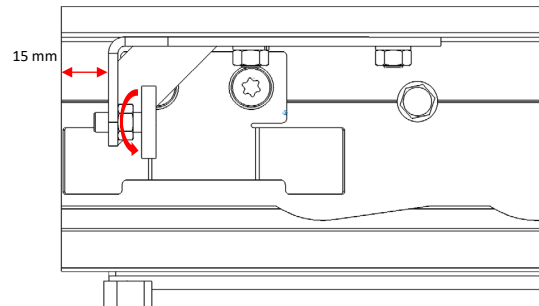
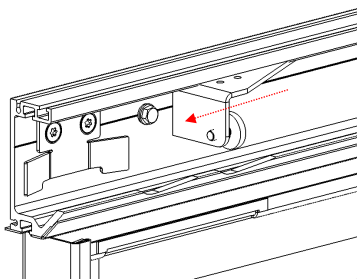
Tool: 13mm wrench, TX-40

► **In case of medical grounding:** Use plastic covers over the mounting screws if the door system must be set up grounded medicaly.

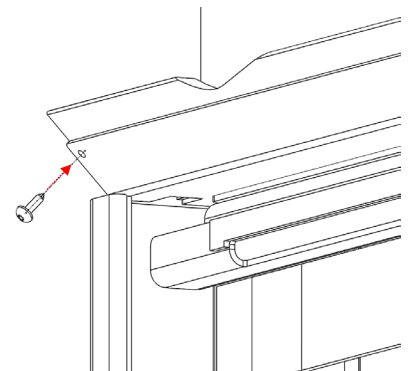


Step 4: Slide the end stop back in the previous position and thighten the bolts. Maintain a distance of 15 mm from the rail end and lock it in position using hex nuts. The stopper can also be manually adjusted by rotating the stopper knob.

Tool: 13mm wrench



► **In case of medical grounding:** Drill a $\varnothing 2,5$ mm hole in the aluminium rail at the position of the $\varnothing 3$ mm hole that can be found on the rail support profile at the opening side of the door system. Use the 2,9 x 9,5 mm self-tapping screw from assembly set 202569 and mount the screw in the pre-drilled hole.

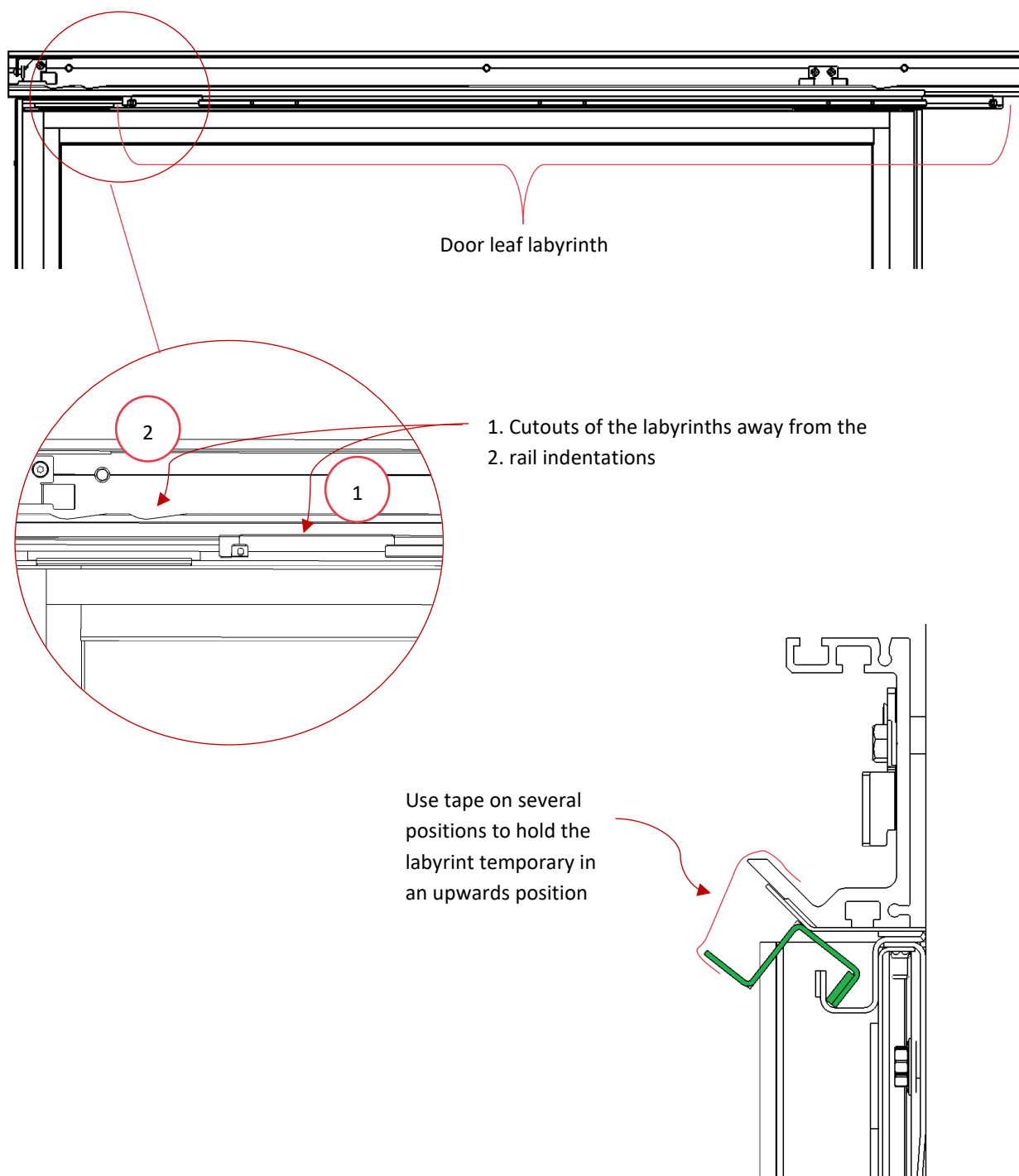


8.4 Door Leaf Assembly

ATTENTION: PLEASE HANDLE WITH CARE



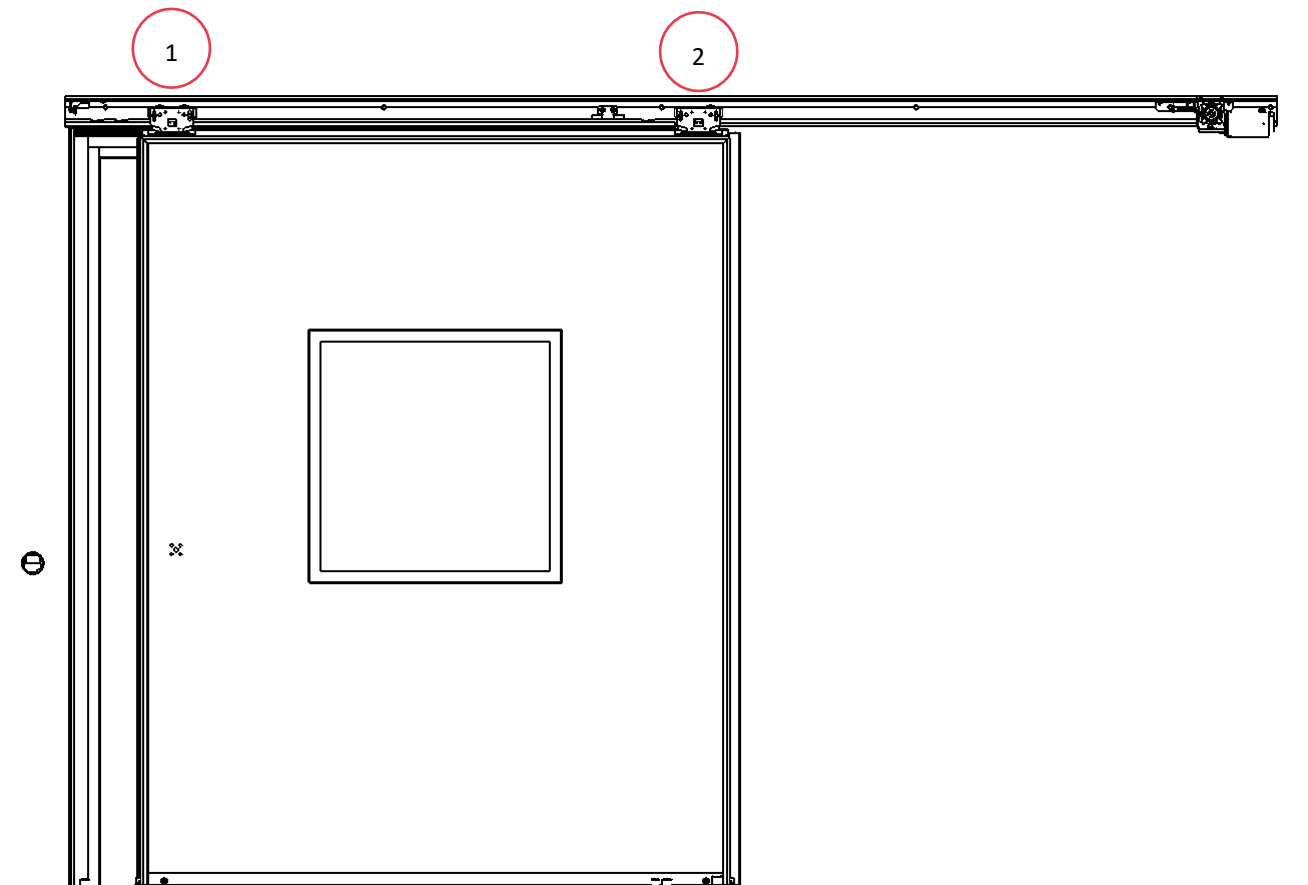
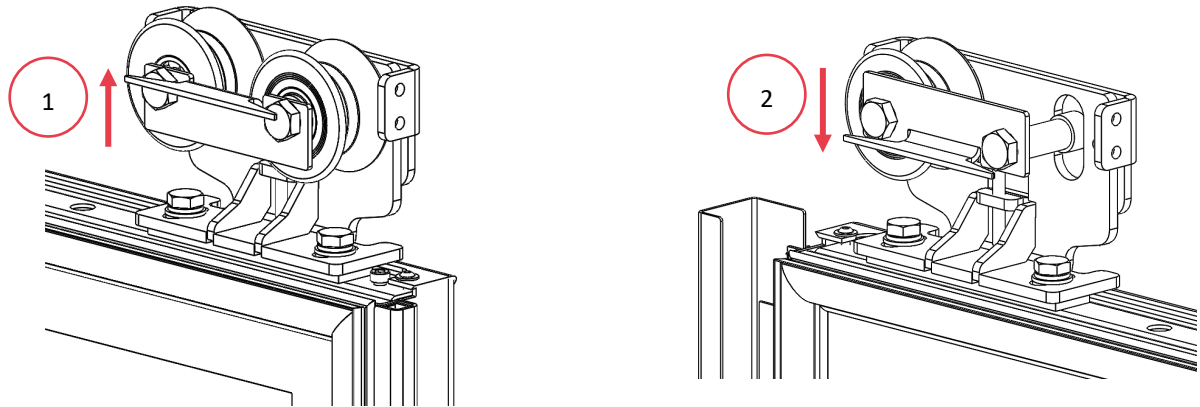
Step 1: Prior installing the door leaf, first place the “door leaf top labyrinth” inside the wall frame labyrinth. Keep the labyrinth in an upwards placed position with the help of tape. Position the cutouts of the labyrinths away from the rail indentations.



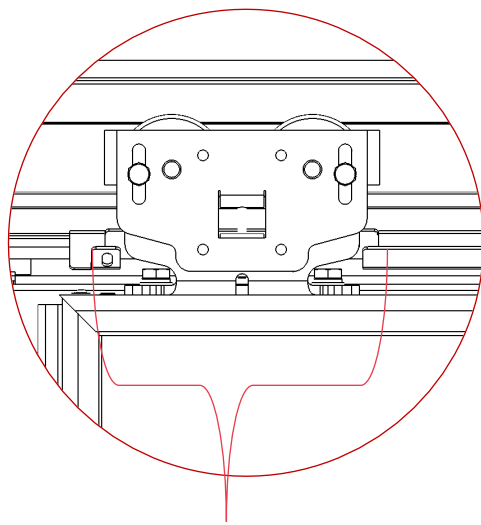
Step 2: Mount the track trolleys on top of the door leaf with M10 x 25 stainless steel bolts already mounted in the door. Ensure that the hooks [1] on the track trolleys are placed on the correct side. At the opening side, the hook should be placed upwards. On the closing side the hook should be placed downwards.

Lock it just, but not all the way, for later adjustment

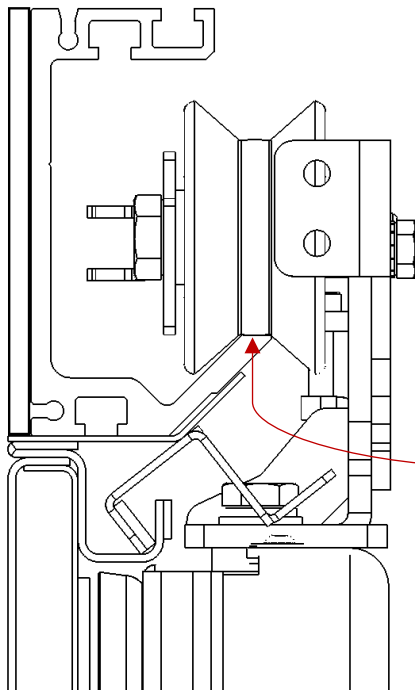
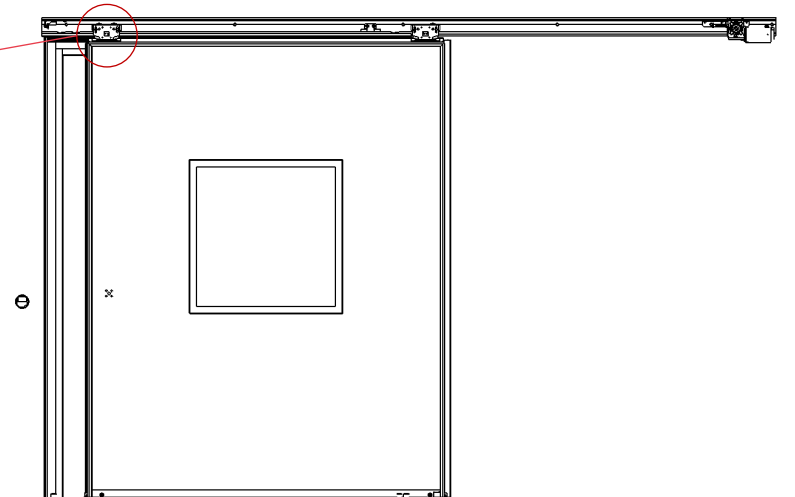
Tool: 17mm wrench



Step 3: Stand the door upright in front of the frame. Make sure that the track trolleys are aligned with the cutouts in the labyrinth. Lift the door into the rail making sure the wheels positioned onto the rail.



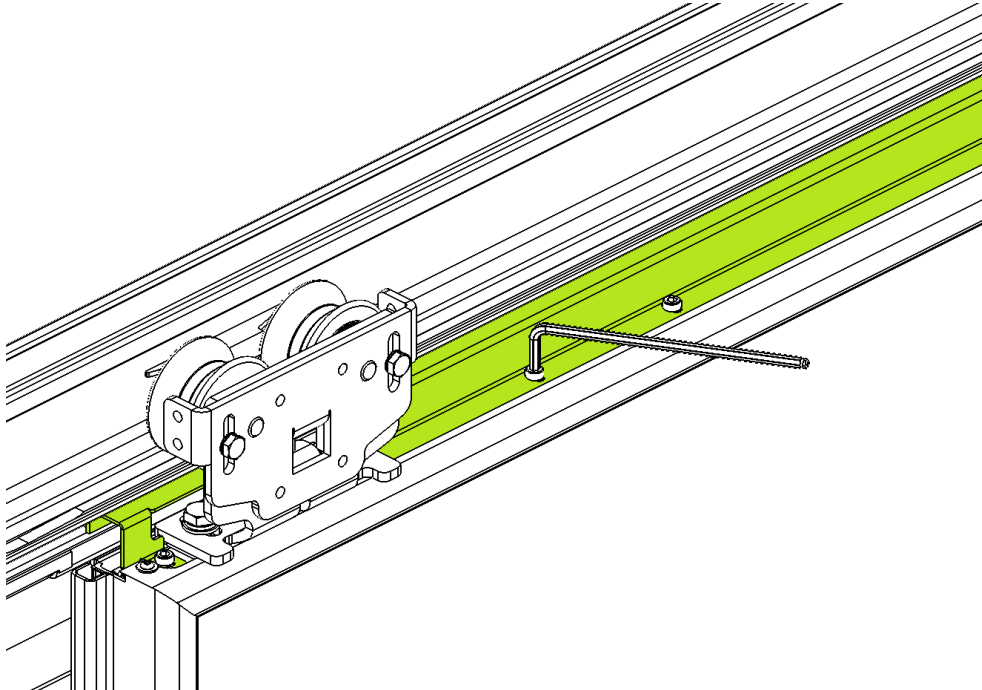
Alignment of the
labyrinth cutout and
track trolley



Wheel position after
lifting the wheels onto
the rail.

Step 4: Remove the tape that's keeping the labyrinth in its upward position and install the labyrinth on the door leaf with the help of stainless steel M6 x 16 Hexagon socket head screws.

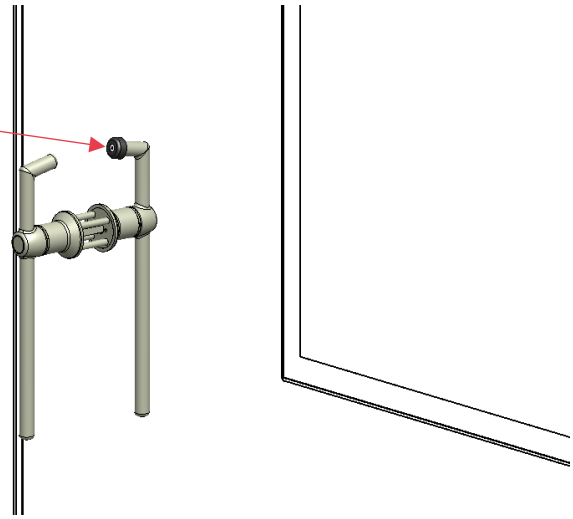
Tool: 5mm Allen key



8.5 Opener (optional)

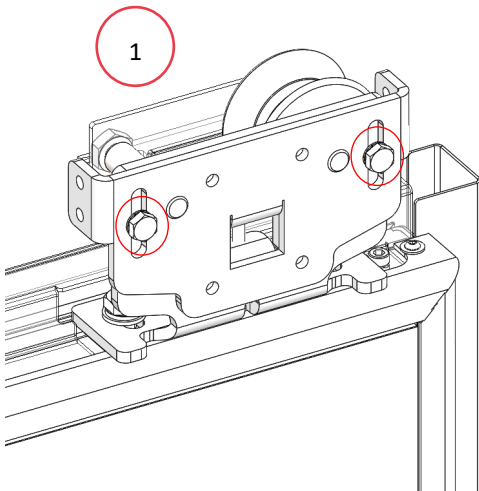
Step 1: Install the openers on the door body using the instruction manual included.

The black cap used in the opener is placed on the inside wall opening to damper if any contact with door frame.



8.6 Adjusting door leaf and drive belt

Adjust both the track trolleys so that no fouling occurs during operation and the door is fully sealed when in closed position.

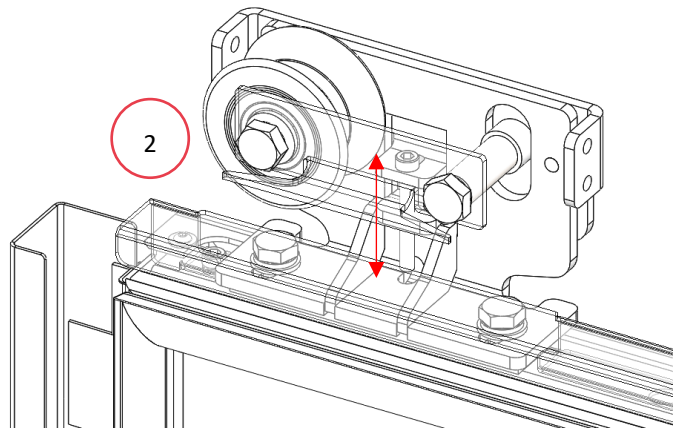


Adjusting height: Make sure that the door is in the open position and the trolleys are out of rail indents. The bottom floor seal should be at a distance of ± 4 mm from the finished floor. Before adjusting the height with the M6 bolt, untighten the M8 bolts located on the opposite side [1]. Tighten the M8 bolts after adjusting the height.

Tool: 5mm Allen key, 13mm wrench

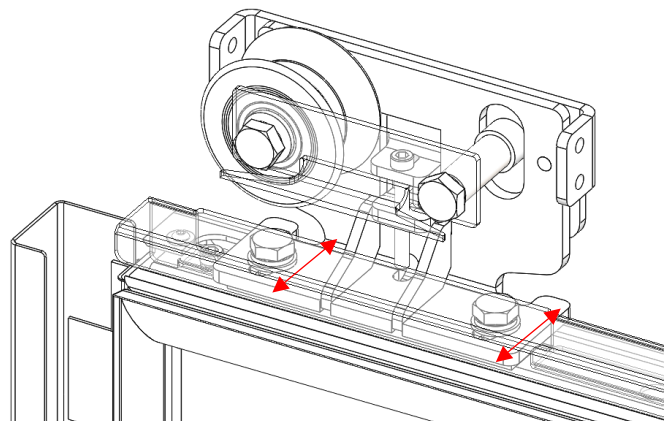
Note: The right wheel is missing, this is only a representation for clear understanding of the sequence.

It is also possible that a trolley is supplied with two wheels, use the same procedure mentioned above for adjustment.



Adjusting depth: Make sure that the door is in the open position. The distance between the wall surrounding seal and the Promaseal (red) strip on the frame should be 3 to 4 mm.

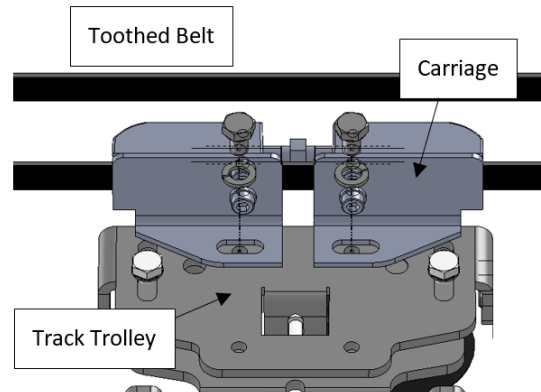
Tool: 17mm wrench (Torque: 40 Nm)



NOTE: When in *Closed* position make sure the EPDM is pressed against the Promaseal strip and the floor to create air tight passage

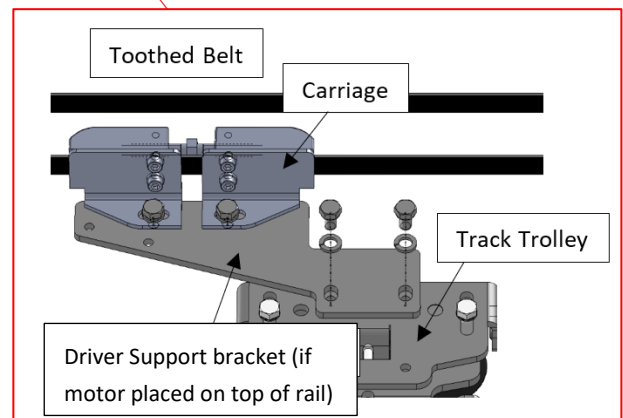
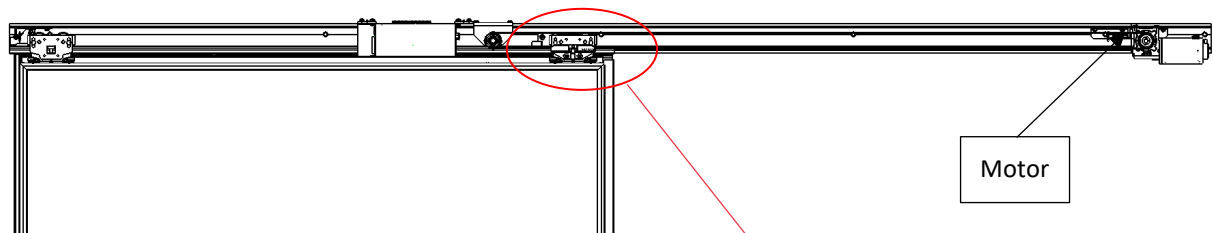
8.6.1 Carriage

Mount the carriage to the track trolley (M8x10).
Tool: 13mm wrench (Torque: 25,5Nm)



Alternatively if the motor is positioned above the rail – Mount the Drive Support bracket including the Carriage to the Track Trolley.

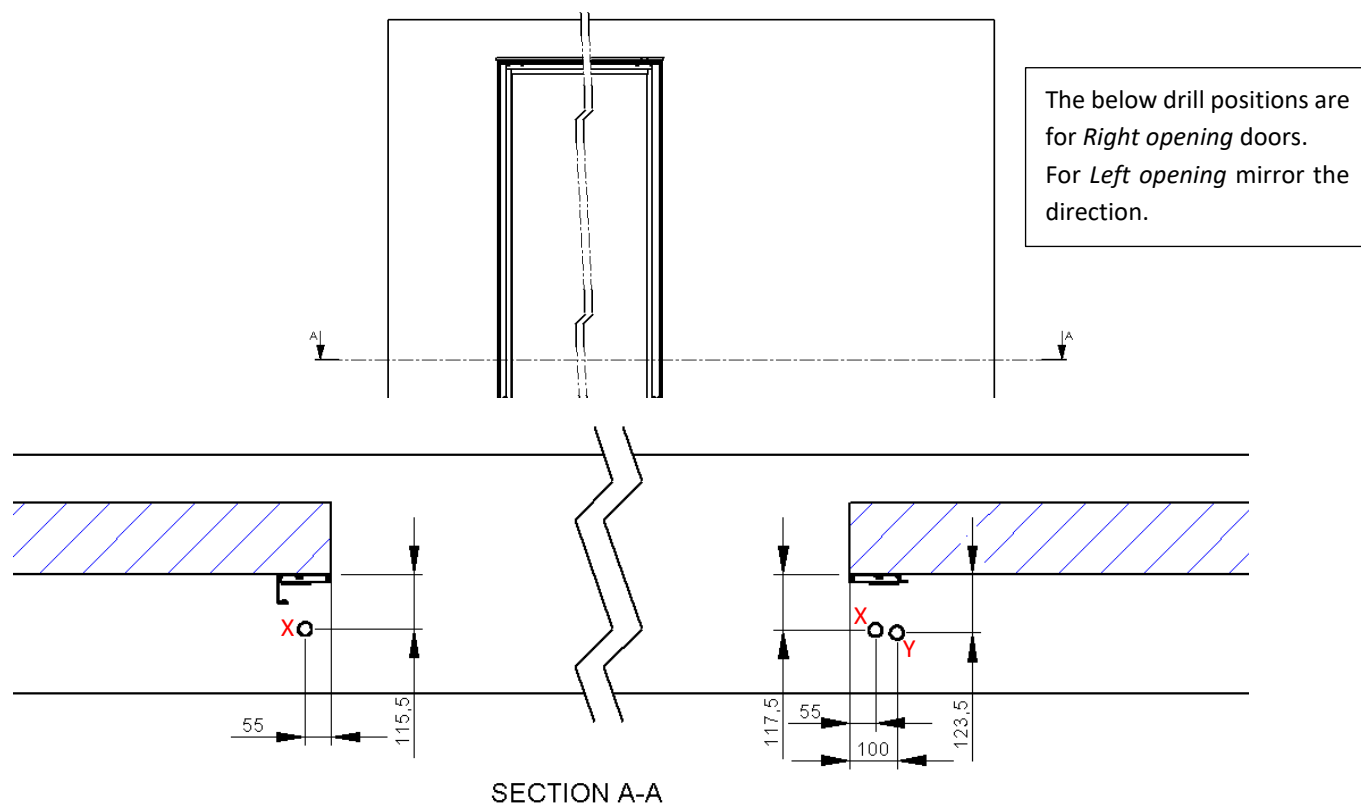
Tool: 13mm wrench (Torque: 20Nm)



8.7 Guiding rollers assembly

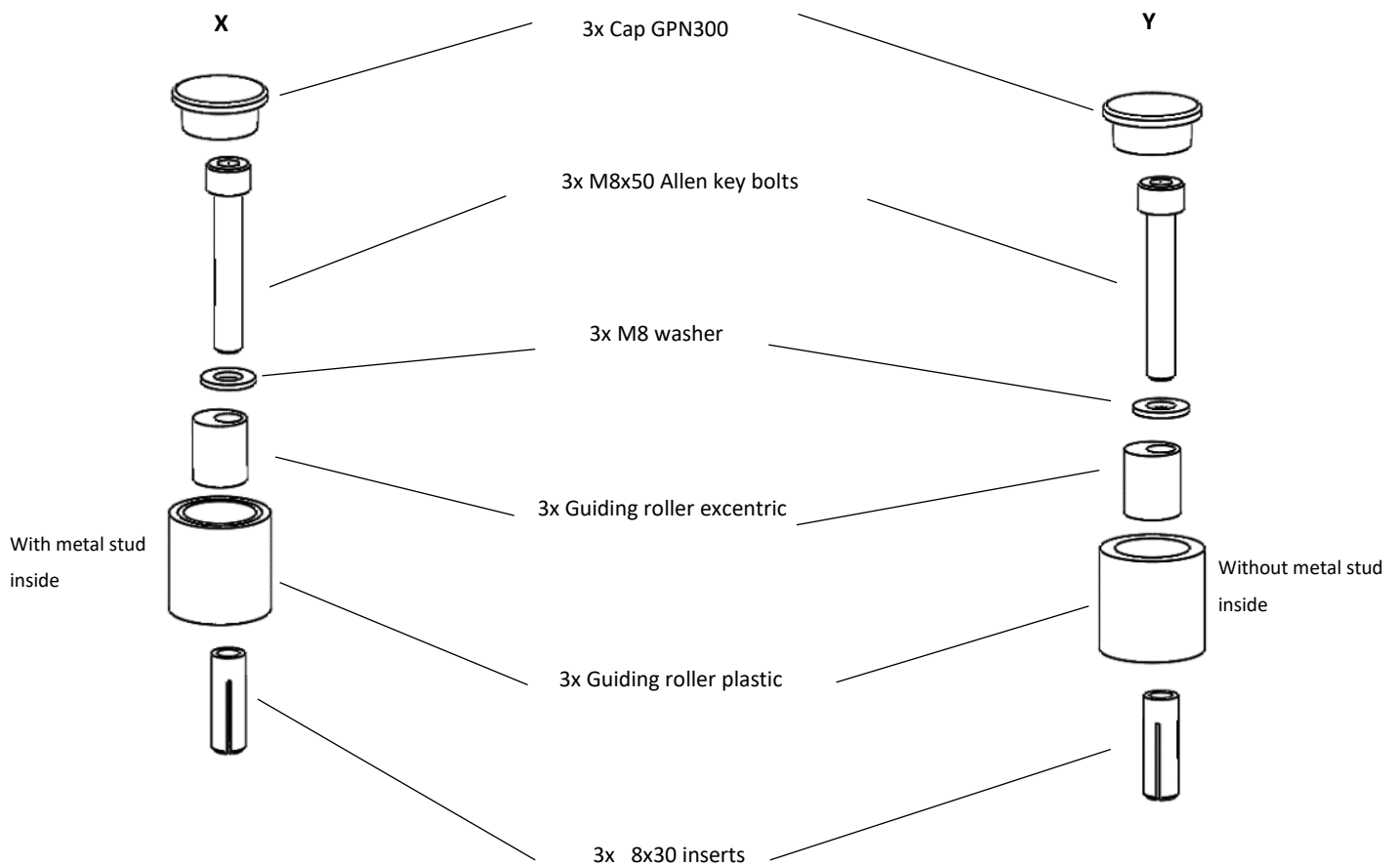
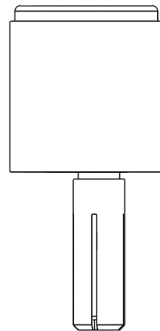
Step 1: Open the door and mark the drill points on the floor. Then drill 3 holes of $\varnothing 10$ mm each on the marked points.

► The positioning of the guiding rollers as shown below is indicational. Place the guiding rollers on sight to get a proper sealing.



Guiding rollers	–	X	With metal stud inside
Guiding rollers	–	Y	Without metal stud inside

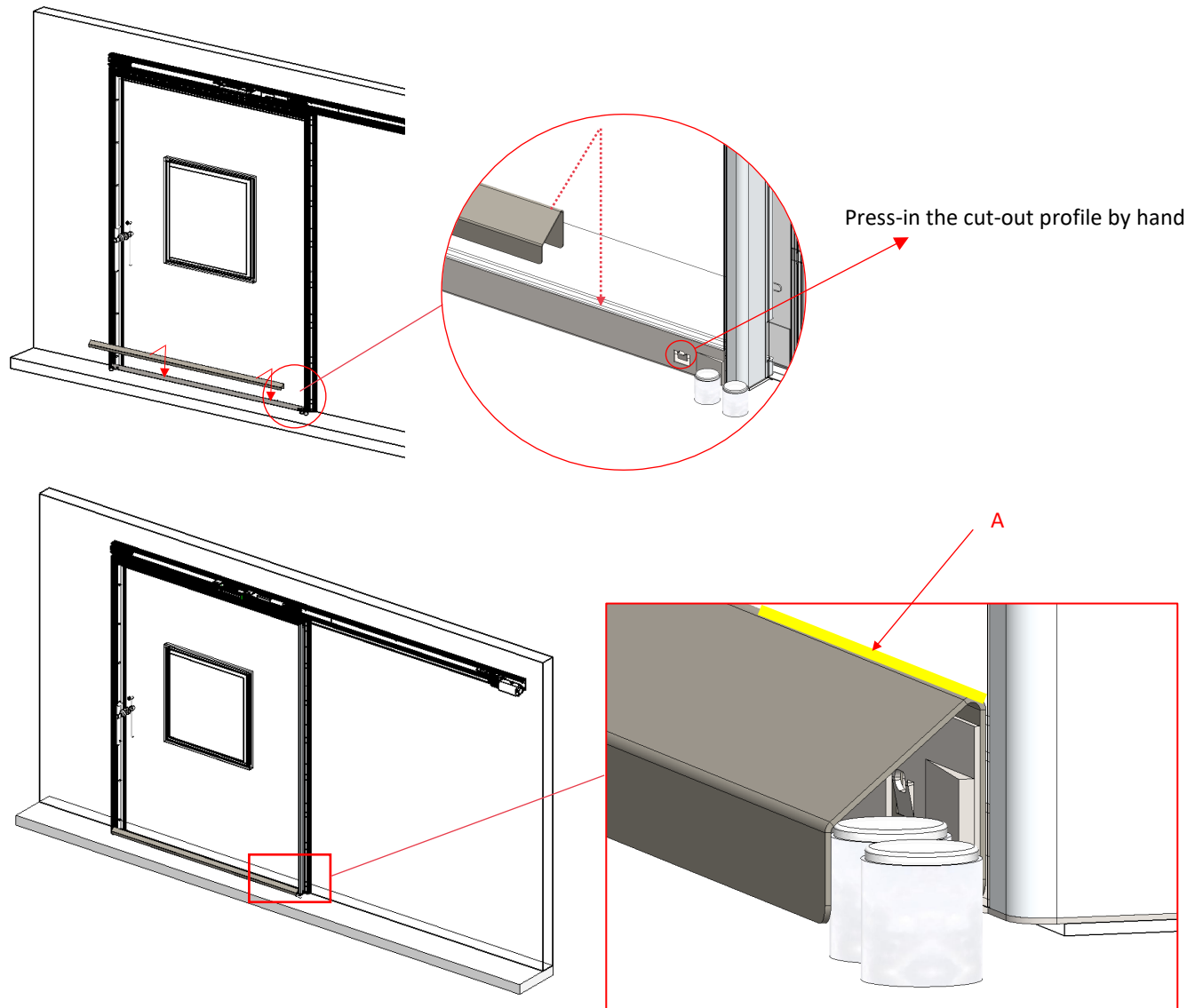
Step 2: Assemble the guiding rollers from the supplied kit (VMF10063).



Step 3: Position the roller in the floor and adjust them by means of the excentric.

Three M8 flat washers are included. Depending on the type of floor, these can be positioned under the guiding roller plastic in order to prevent the guiding roller getting jammed into the ground.

Step 4: Place the guiding roll cover into the gaps and snap it inside the cut-out.



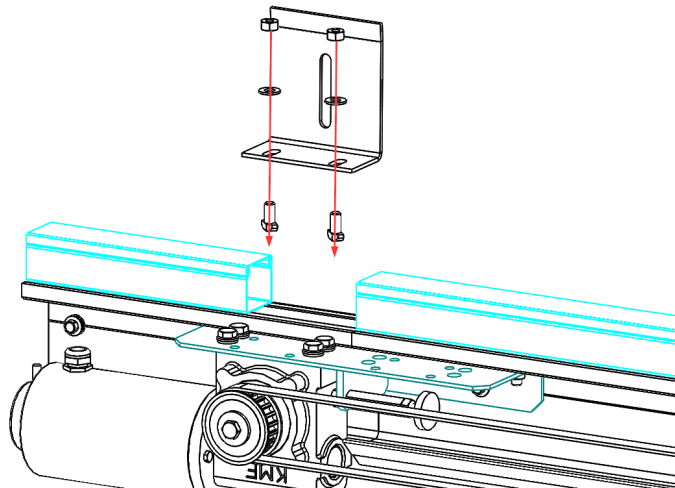
A = Sealant along the length of lower guide (Silicone from assembly kit 202569).

8.8 Canopy

ATTENTION: PLEASE HANDLE SAFELY WHEN HANGING THE PROTECTIVE COVER DUE TO FALL HAZARD!



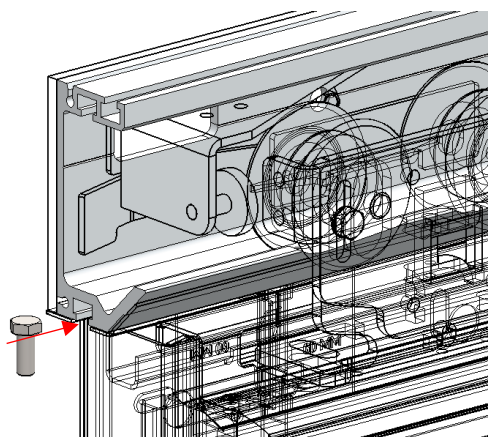
Step 1: Mount cap brackets on top of the rail. The number of delivered cap brackets depends on the length of the rail.



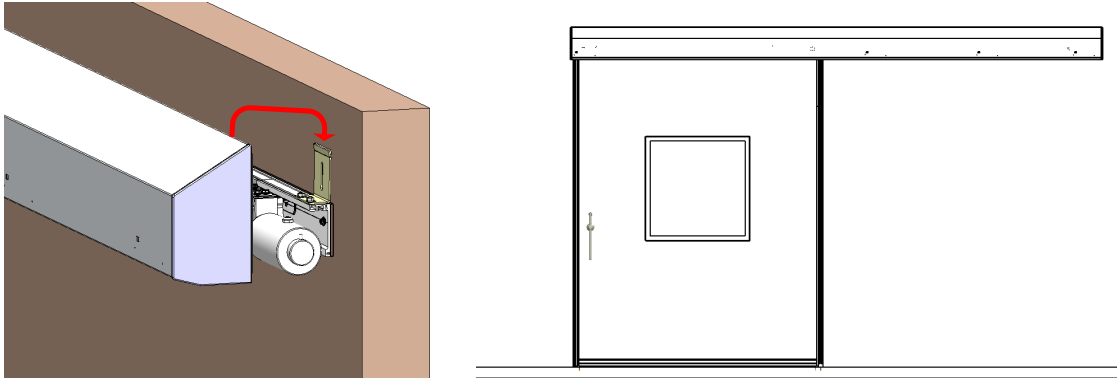
Step 2: Snap-in the plastic/steel caps over the ends of the canopy and keep it aside.



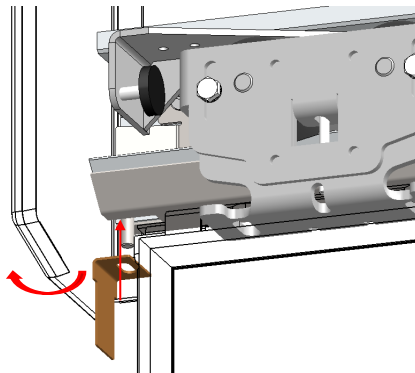
Step 3: Slide in the M8 hex bolt on the opening side of the rail assembly up to the very end possible.



Step 4: Hang the Canopy onto the rail. The edge flange of the Canopy must hang-in the edge flange of the cap brackets.

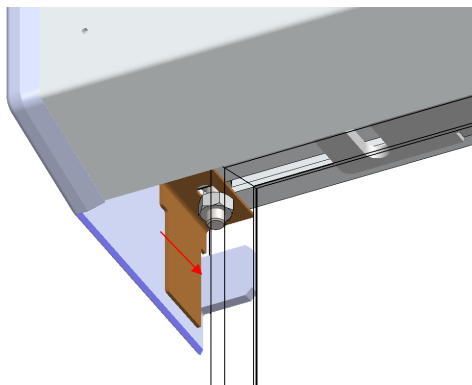


Step 5: Slide in the canopy cap locks to the M8 hex bolt inserted in step 3. Push the caps a bit outwards to make some slack/clearance.

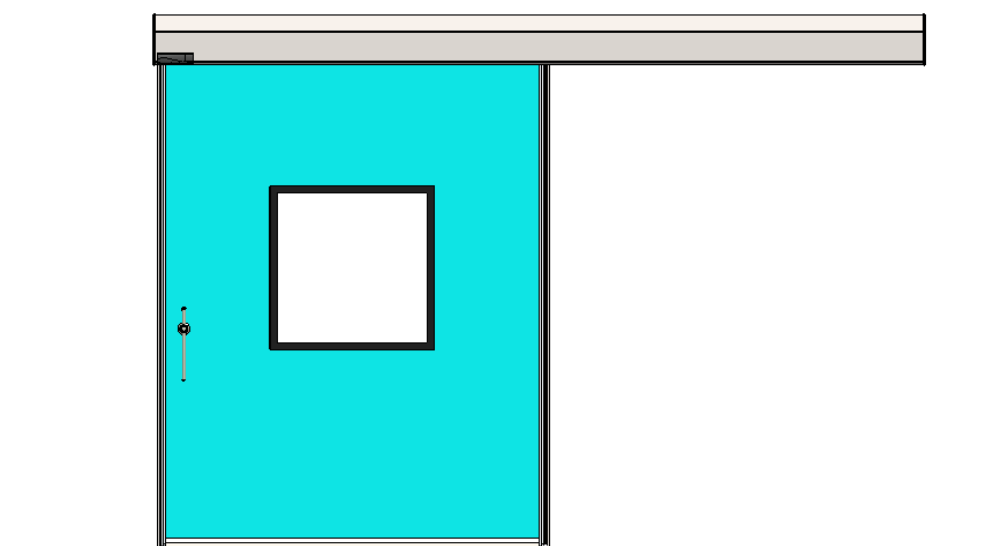
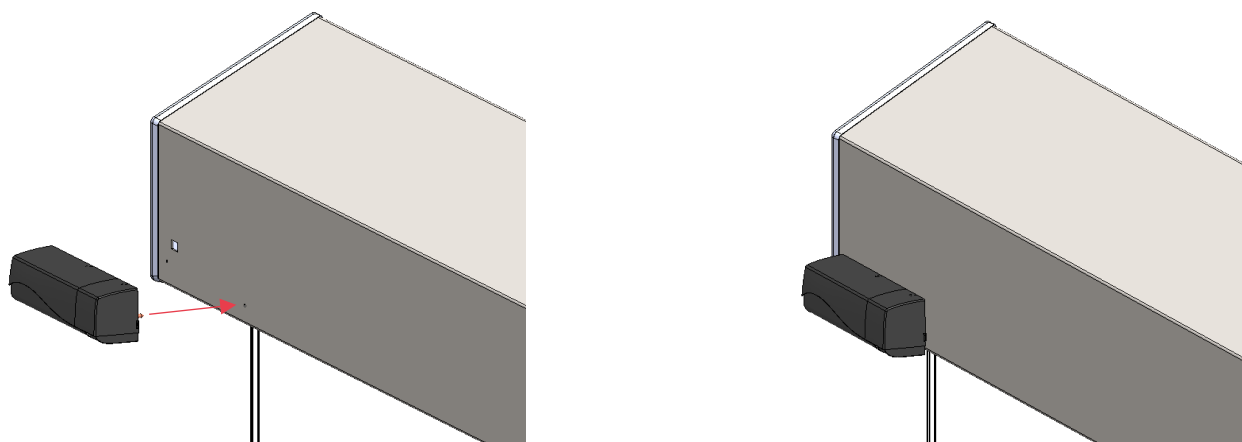


Step 6: Adjust the canopy cap lock by pushing it towards the wall, using the slot and restricting movement of canopy. Lock it in position using the M8 hex nut provided. Use a Hexagon Nut Driver for long reach and hold it in position with the other hand.

Note: This ensures that the canopy cannot be removed without using additional tooling and safety. To disassemble, simply follow the steps in reverse order.



Step 7: Mount the IXIO sensors on the holes provided, connect all the electrics (*IXIO sensor and motor*) to its correct supply unit and set the door to testing.
Additional steps on controller configuration and IXIO sensor can be found in SDA (rail-automation) installation manual.



9. Operations & Maintenance

Automatically operated doors are opened by means of an encoder. If there is a defect in the electronic system, or a power cut, the door can be opened by means of the handle mounted on the door.

The installation of the SDA04 or DCB2 controller is described in the controller manual.

Installation of IXIO sensor in rooms requiring G2 or K3 classification:

In rooms with G2 or K3 classification, all accessible conductive parts that could be live due to a defect, as well as all external conductive touchable parts, must be included in the equipotential bonding system of the relevant room (NEN1010-7 / A3). This means that the parts mentioned are connected to a central earthing point via a compensating line, which means that the parts have a constant or almost constant potential.

Maintenance (six-month intervals)

During maintenance, switch off the SDA04 controller and take the plug out of the socket!

- Clean all moving parts.
- Check the gear belt tension.
- Check that the door hermetically seals when closed.
- Adjust door leaf if required.
- Clean the rubber seals.
- Examine for any unusual levels of wear.
- Check the function of the control system.

WARNING! In medical ground systems, the door must be connected directly to the medical ground. The provisions for this have been made on the rail. The wire from the drag chain should be attached to the wheel set.

Basic maintenance can be carried out by either a Metaflex Doors service technician or a member of your own staff. However, in either case, a log should be kept to record maintenance history.

Clean the door and frame components using a mild detergent. Keeping the rail system clean of dust and other contaminants is sufficient to ensure proper functioning.

Damage

If a door or frame component is damaged, a replacement can be ordered at Metaflex Doors Europe. Contact the sales department at Metaflex or your local retailer.

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