

INSTALLATION INSTRUCTIONS FOR SMU TYPE INTERIOR AND EXTERIOR METAL DOORS, INCLUDING FIRE PROTECTION DOORS USING ADJUFIX SLEEVES

NB!

- This manual only deals with installing the door set described in the manual. Separate instructions apply for the installation of additional elements (fittings, etc.).
- Read this manual carefully before you start!

INSTALLATION

Before installation, please note the following:

- The door frame of the SMU type metal door (hereinafter referred to as „opening filler“) must be fastened tightly and firmly into a completed structural opening and onto a completed floor. The thickness of the flooring material should also be taken into account. The most suitable installation time is after casting the floor and, if the side cheeks are finished without cover strips, before any possible finishing work on the wall. When using cover strips, it is advisable to install the door after the final finishing of the structural opening, which includes painting work.
- **Suitable materials for isolating gaps between the door frame of the opening filler and the wall are shown in Table 1**, for opening fillers without a fire resistance class, insulation foam can be freely chosen according to the conditions of the environment.
- The door frame must be fixed with a screw fastening, suitable for the wall type. It is permitted to use wedge anchor bolts, screws or bolts with metal or plastic dowels or other fasteners, the minimum dimensions are shown in **Table 1**.

	SMU 101/201	SMU 101/201 EI30/EI60	SMU 110/210	SMU 110/210 EI120
<i>Isolation materials for the gaps between the door frame and the wall</i>				
Vill Paroc eXtra*	x	x	X	x
Soudal Soudafoam FR **	x	x	X	
Penosil Premium Gunfoam Fire Rated**	x	x	X	x
<i>Minimum required dimensions for the fasteners</i>				
Mounting sleeve (Adjufix) AH28 M16x28+Screw min 6x65 mm	x	x	X	
Mounting sleeve (Adjufix) AH28 M16x28+Screw min 7,5x82 mm	x	x	X	x
Screw for a Fibo block Ø 8x90 mm	x	x	X	
Self-drilling screw for a metal frame Ø 6,3x55 5x60 mm/dowel 8x50 mm	x	x	x	

*Installation gap up to 30 mm

**Installation gap up to 17 mm

Table 1 Fasteners for the door frame and isolation materials for the gaps between the frame of the opening filler and the wall

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Work sequence:

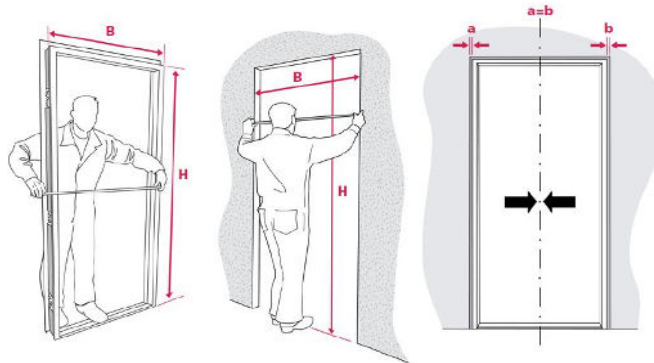
- 1) When transporting the opening filler to the aperture, avoid damaging the surface finish and, if necessary, protect the surfaces with cardboard, plastic foil or some other material
- 2) Check the compatibility of the structural opening and the dimensions of the door.

NB! If the wall aperture exceeds the allowed tolerances, it must be rebuilt without compromising the fire safety and sound insulation properties.

It is important that the wall construction:

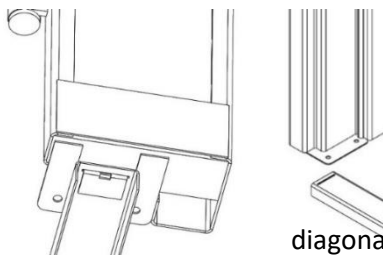
- Stably supports sleeve nuts;
- is of sufficient strength to fasten the frame screws;
- can support the weight of the door.

- 3) Separate the door leaf/leaves from the frame by lifting them off the hinges.

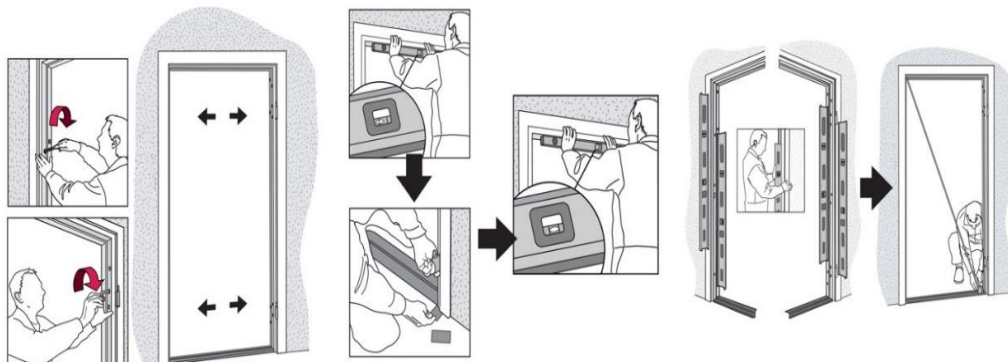


- 4) Place the door frame into the structural opening on the completed and level floor.
- 5) Place the door frame in the center of the structural opening, adjusting its position by turning the frame sleeves toward the wall with a hexagonal screwdriver. Check that the door frame is level, both vertically and horizontally.
- 6) Adjust the frame sleeves in pairs on the lock and hinge sides and on double leaf doors at the top of the frame as well, so that it does not deform.

NB! In case of an opening filler without a threshold, make sure that you remove the installation support from the door frame and later from the sub-frame before installation!



- 7) Measure the internal diagonals of the door frame. The dimensions of the internal diagonals should not differ by more than ± 1 mm.



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- 8) Bend the fixing elements of the frame according to the aperture.
- 9) The thresholds of opening fillers, which are filled with wool, must be fitted with fire resistance class insulation foam – for opening fillers with a fire resistance class is shown in **Table 1**, and for opening fillers without a fire resistance class, the isolation foam can be chosen freely according to the conditions of the environment.

NB! If necessary, fasten the hinge-side lower corner with a wedge (in the case of a fire protection product, use a wedge, made of non-combustible material).

- 10) Fasten the door frame through the door sleeves with screws.
- 11) Check with a spirit level that it is level, both vertically and horizontally. Depending on the type of wall, drill holes of an appropriate size and, if necessary, install dowels.

NB! Avoid deforming the door frame!

- 12) When the door frame of the opening filler is too large to be transported to the place of installation, a so-called lego door frame is utilized – for the assembling instructions, see Appendix 1.
- 13) Fix fasteners 1, 2 and 3 (see Figures 1; 2 and 3) so that the threshold (if there is one) and the hinge-side door post are level. See Figure 9.

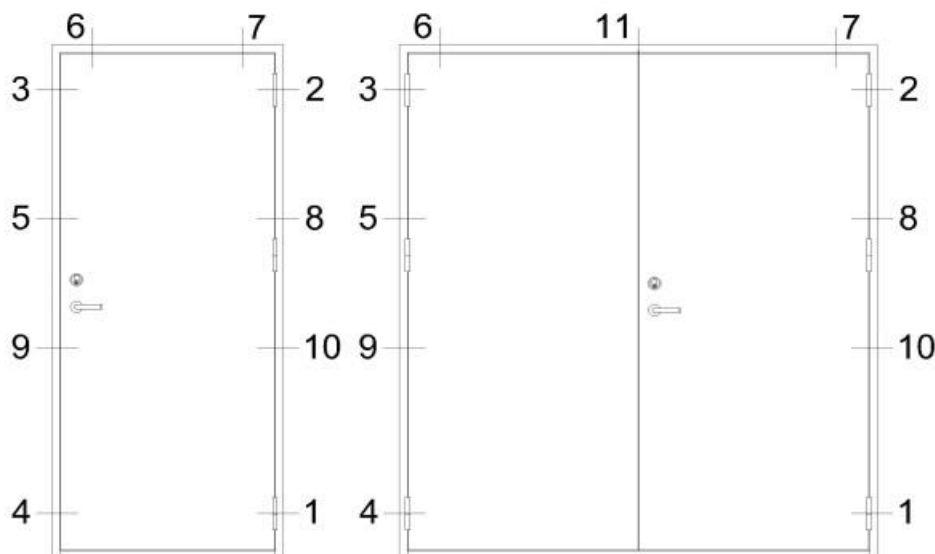


Figure 1 – Layout of the fasteners SMU101/201
SMU110/210*

*doubled according to Figure 6

- 14) After attaching the hinge side frame and before fixing the lock side frame, make sure that the frame and the door leaf/leaves fit together.

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- 15) Apply a little lubricant to each door hinge cap, then lift the door leaf/leaves on the hinges. Check that the door is working properly (for a double door, install an active door leaf in the frame and check the uniformity of the gaps between the door leaf and the frame at the top and bottom of the door leaf on the lock and hinge side. See Figure 4.

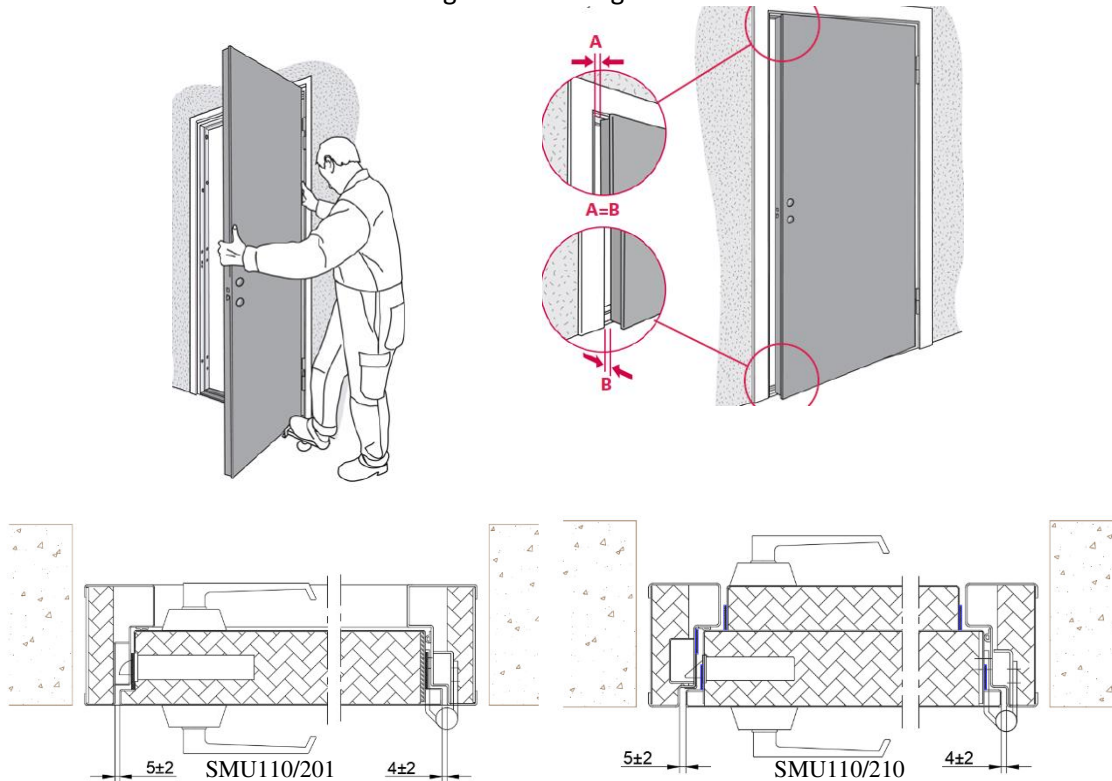
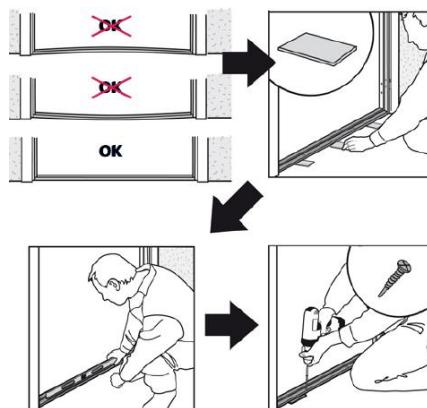


Figure 4 – Tolerances of the gaps between the door leaf and the frame

- 16) If necessary, adjust the door!



- 17) The threshold must be supported by metal strips to prevent it from sagging. Make sure the threshold is level. Attach the level threshold and seal with assembly foam and / or sealant.



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- 18) Evaluate the closing of the door using a piece of paper. Place a sheet of paper between different areas of the closed door and move it around. The seal works well when it's hard to move the sheet of paper.



- 19) Fix faster 4 (see Figure 1; 2 and 3)
20) *In the case of a double door, install a passive door leaf into the frame and, if necessary, check the performance of the bolt(s)/fittings and adjust them, if necessary.
21) Fix the rest frame fasteners (**the number of fastener holes depends on the door type and dimensions**).
22) Fasten the threshold. For fastening screws, see Table 1!
23) Fill the gap between the frame and the wall according to **Table 1** and the descriptions in Figures 5 and 6.
NB! The gap between the jamb and the wall must be completely filled, from the inner edge of the frame to the outer edge!



- 24) Install the screw head caps of the fastener holes (unless required otherwise) and if there are cover strips, fasten them as well.

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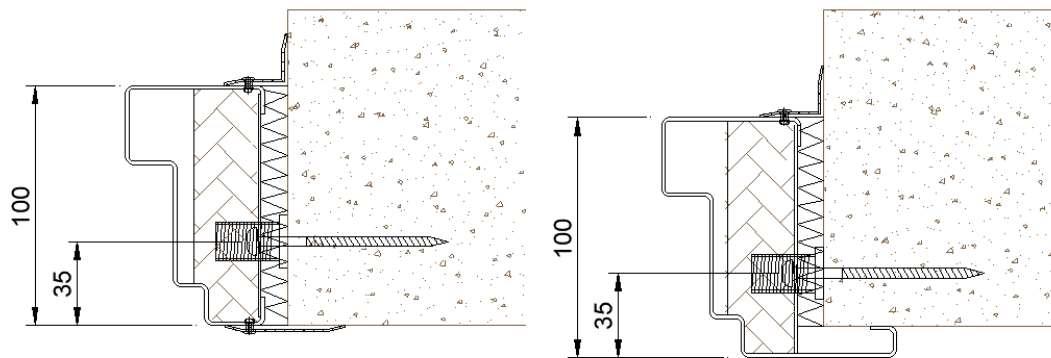


Figure 5 – Installation of the door into the structural opening SMU101/201

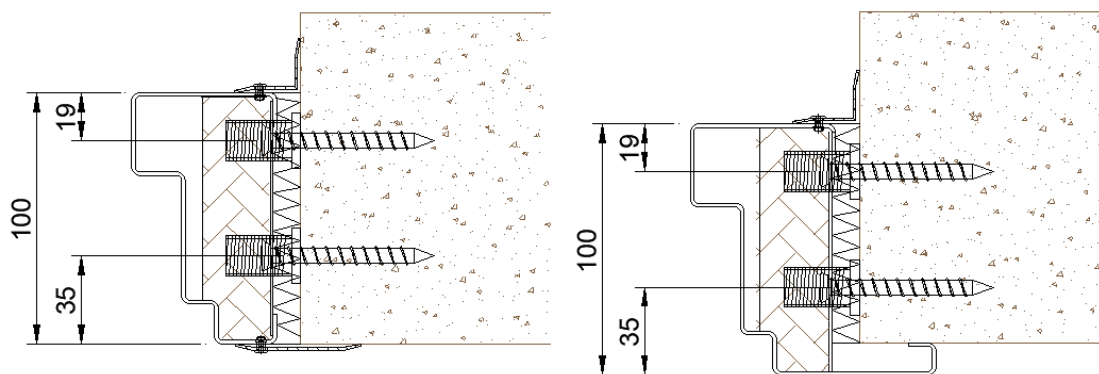


Figure 6 – Installation of the door into the structural opening SMU110/210

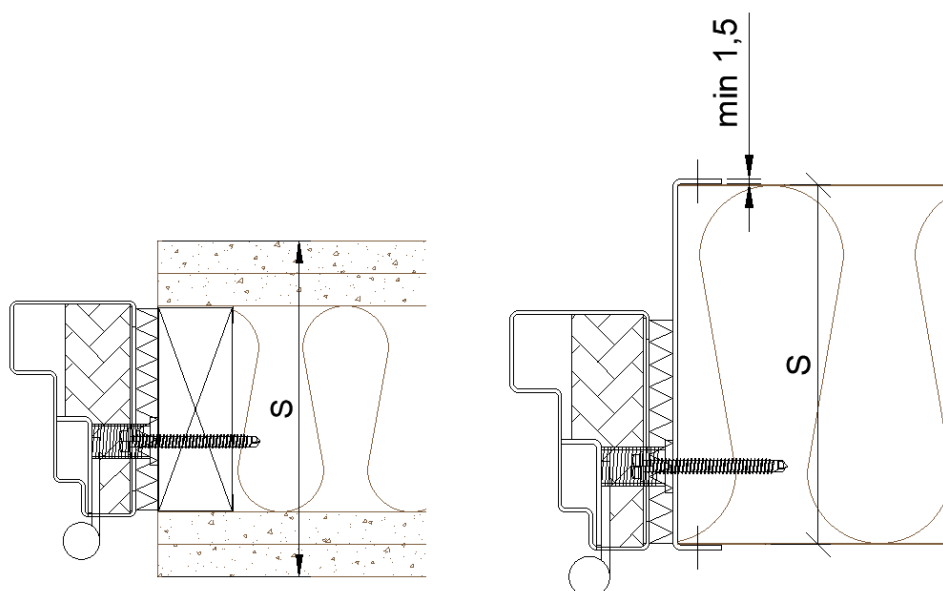


Figure 7 – Installation of the door into a lightweight wall

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NB! Pay attention to the installation depth of the opening filler! If necessary, install a bar to prevent the opening filler from opening too wide. See Figure 8.

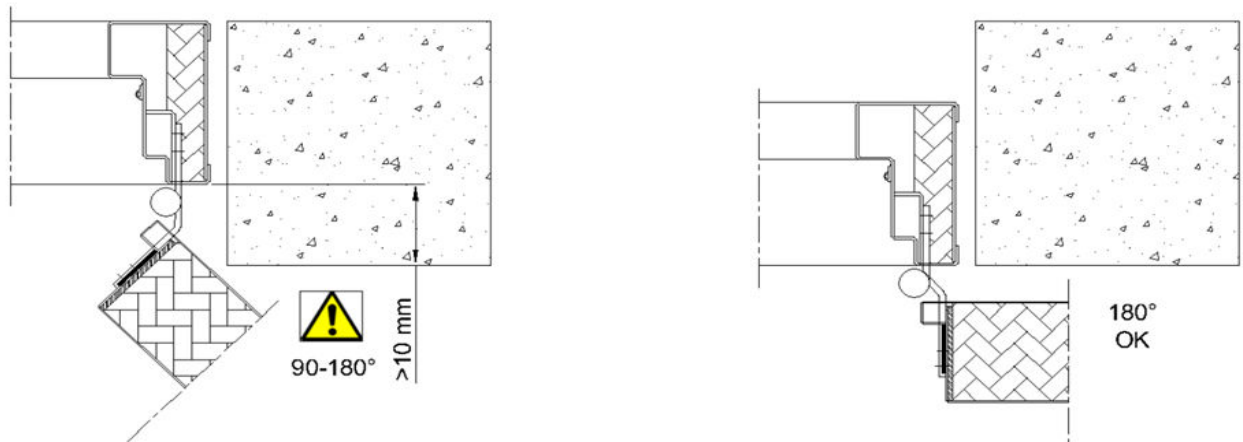


Figure 8— Installation depth

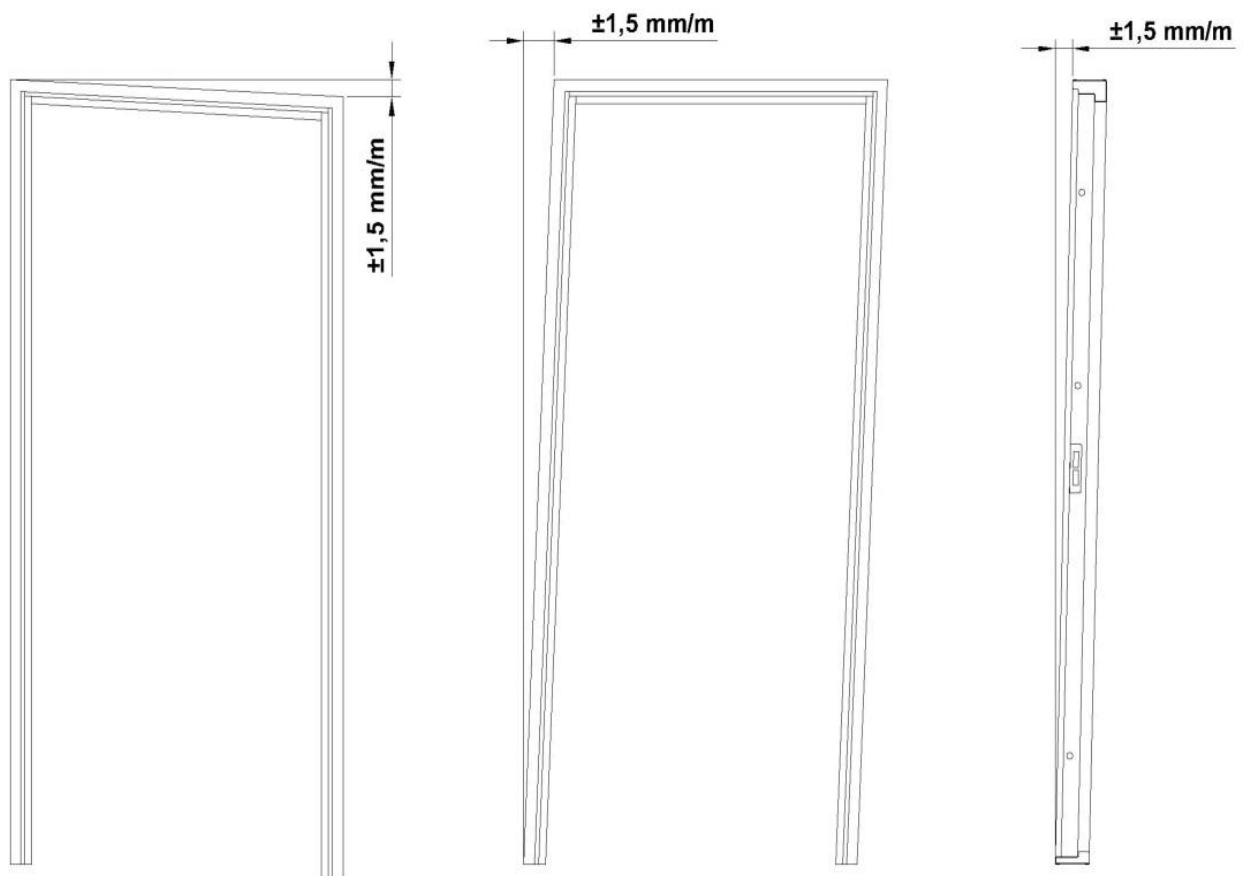


Figure 9 – Installation tolerances of the door frame

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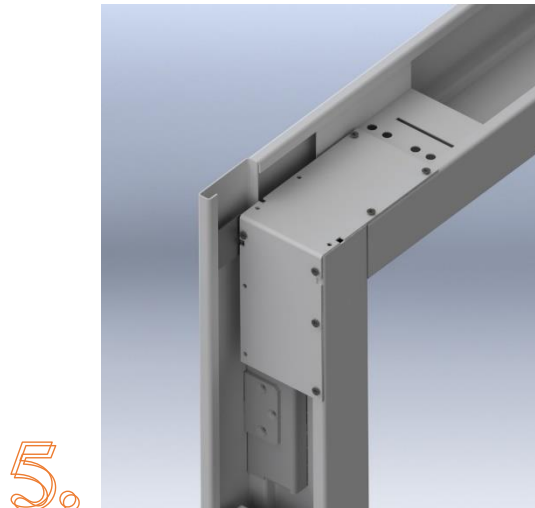
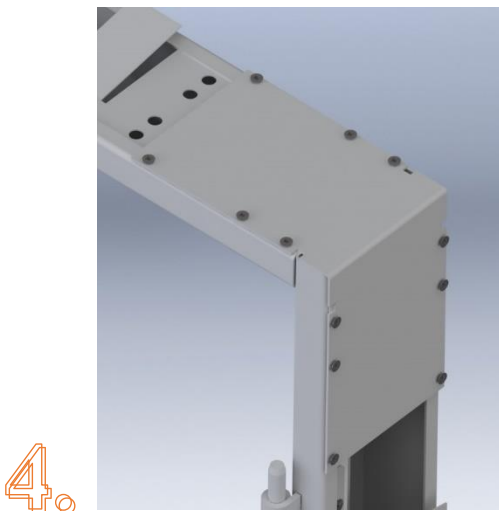
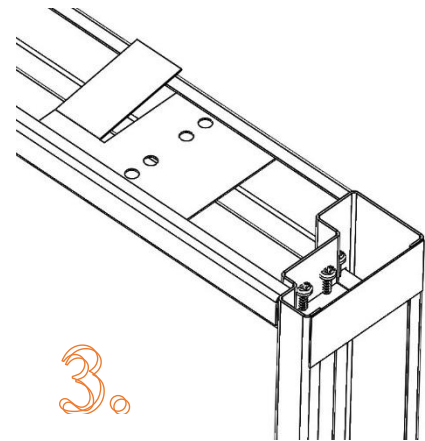
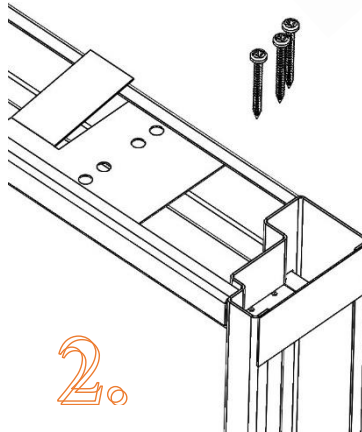
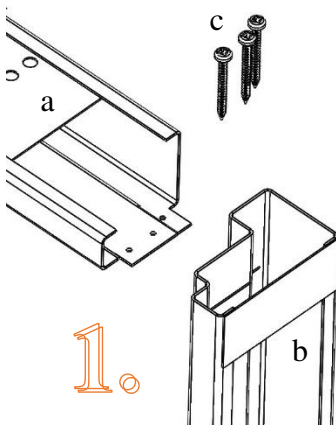
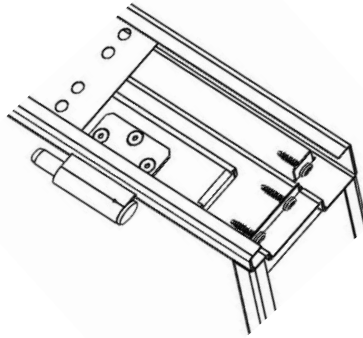
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APPENDIX 1

Lego door frame parts

1) The parts of the lego door frame are fastened using 4,2x25 mm self-drilling screws (torx head).

- a) Head jamb
- b) Side jamb
- c) Self-drilling screw 4,2x25 mm
- d) Lego frame's reinforcing bracket



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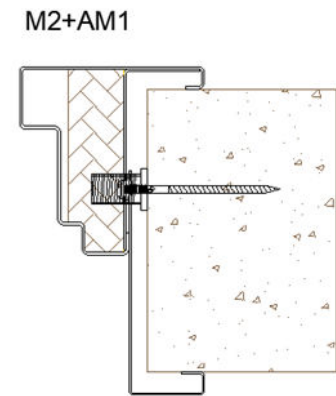
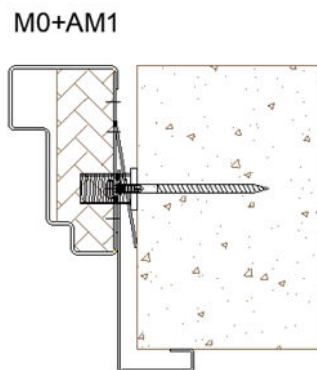
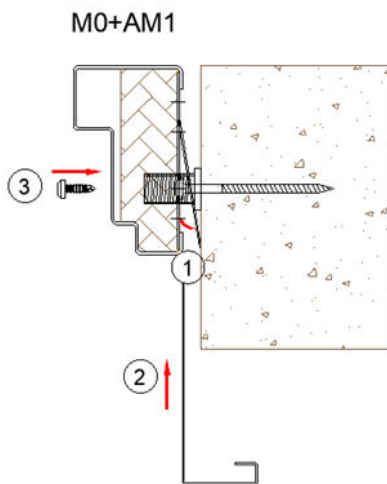
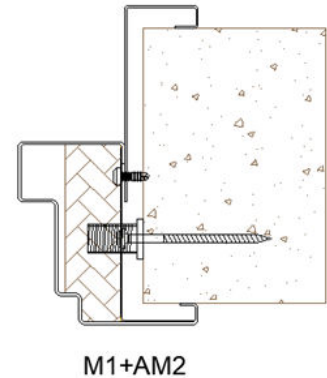
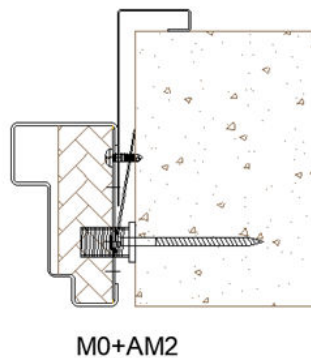
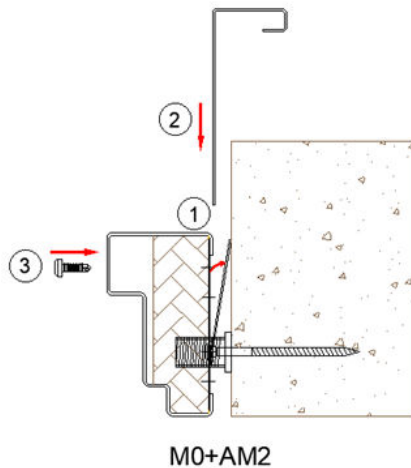
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APPENDIX 2

Sub-frame installation instructions.

- Bend the frame's fastening elements away from the frame 5-10 mm
- Install the sub-frame between the frame and bent frame's fastening element
- Fasten with a self-tapping screw



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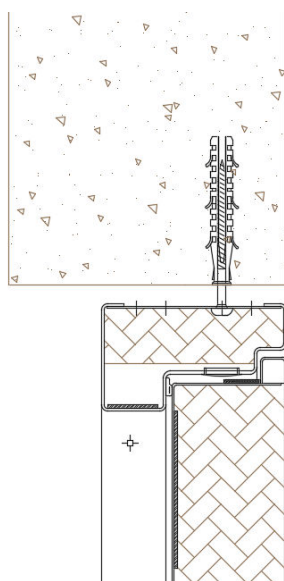
APPENDIX 3

Water drip bar installation instructions.

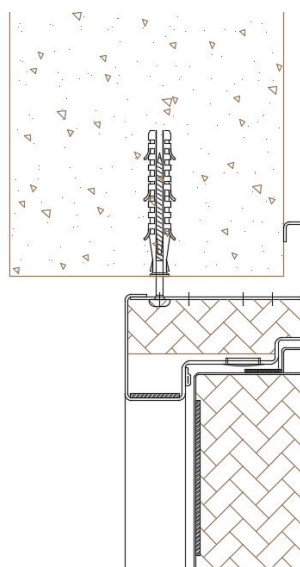
Choose an appropriate method for installing the water drip bar (1-3).

When mounting the water drip bar, fasteners must be selected according to the wall structure. Ø4.2 mm self-drilling screws or rustproof Ø3,2x10 mm rivets should preferably be used.

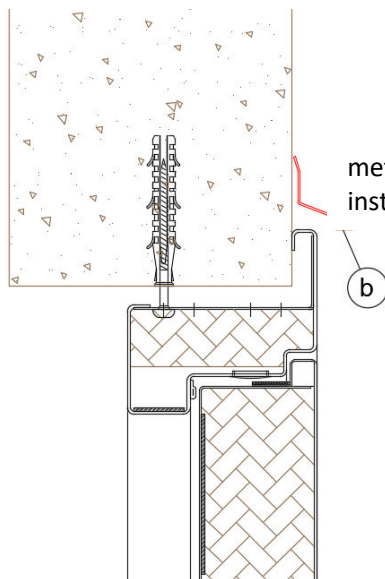
After installation, the top side of the water drip bar must be siliconized.



method of
installation no 1



method of
installation no 2



method of
installation no 3

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