⚠ Attention! General warnings!

Follow all safety precautions when installing the door set. Review the warnings and instructions below before starting the installation.

⚠ This manual covers only the installation of the door set. Additional elements must be installed according to their separate instructions.

⚠ Parts of the set may have sharp edges. Wear protective equipment during installation work.

⚠ The door components included in the set are heavy.

⚠ When supporting the door on the floor or ground, use material that protects the paint layer (e.g. rubber, cardboard, wood, or plastic). Do not support the door on a protruding latch rod.

⚠ The delivery set does not include sealing materials for filling the gap between the frame and the wall, nor support blocks. Other necessary parts for installing the door are included in the delivery set. Adding extra components may affect the safety of the door and the warranty coverage.

⚠ If the installation is not in accordance with the instructions and if locks, fittings or materials not specified by the manufacturer are used, the door will lose its performance properties. In such cases, the door will no longer meet the certified and declared properties, and the installer is required to remove the certificate marking from the door.

TABLE OF CONTENTS

1   TOOLS AND FASTENERS

For fixing the door frame, use the following fasteners:
- For stone or concrete walls use a concrete screw with a minimum size of 7,5×65 (for example ESSVE art. 105267). Pre-drill a Ø6 hole.
- For lightweight masonry walls (minimum density 450 kg/m³) use a lightweight concrete screw with a minimum size of 8,0×120 (for example ESSVE art. 10523). No pre-drilling required.
- For gypsum board wooden frames use a screw with a minimum size of 6,0×65 (for example ESSVE art. 105294). No pre-drilling required.
- For steel profiles use a screw with a minimum size of 7,0×45 (for example ESSVE art. 105379). No pre-drilling required.

Use a 10 mm hex key to adjust the sleeves.

2   METHODS OF INSTALLATION

2.1   Fire resistance class EI30 and EI60 doors may be installed into concrete, masonry, or stone walls with a minimum density of 450 kg/m³, as well as in gypsum-board walls.

2.2   Fire resistance class EI60 doors may be installed into sandwich panel walls.

2.3   Fire resistance class EI120 doors may be installed into concrete, masonry, or stone walls with a minimum density of 450 kg/m³.
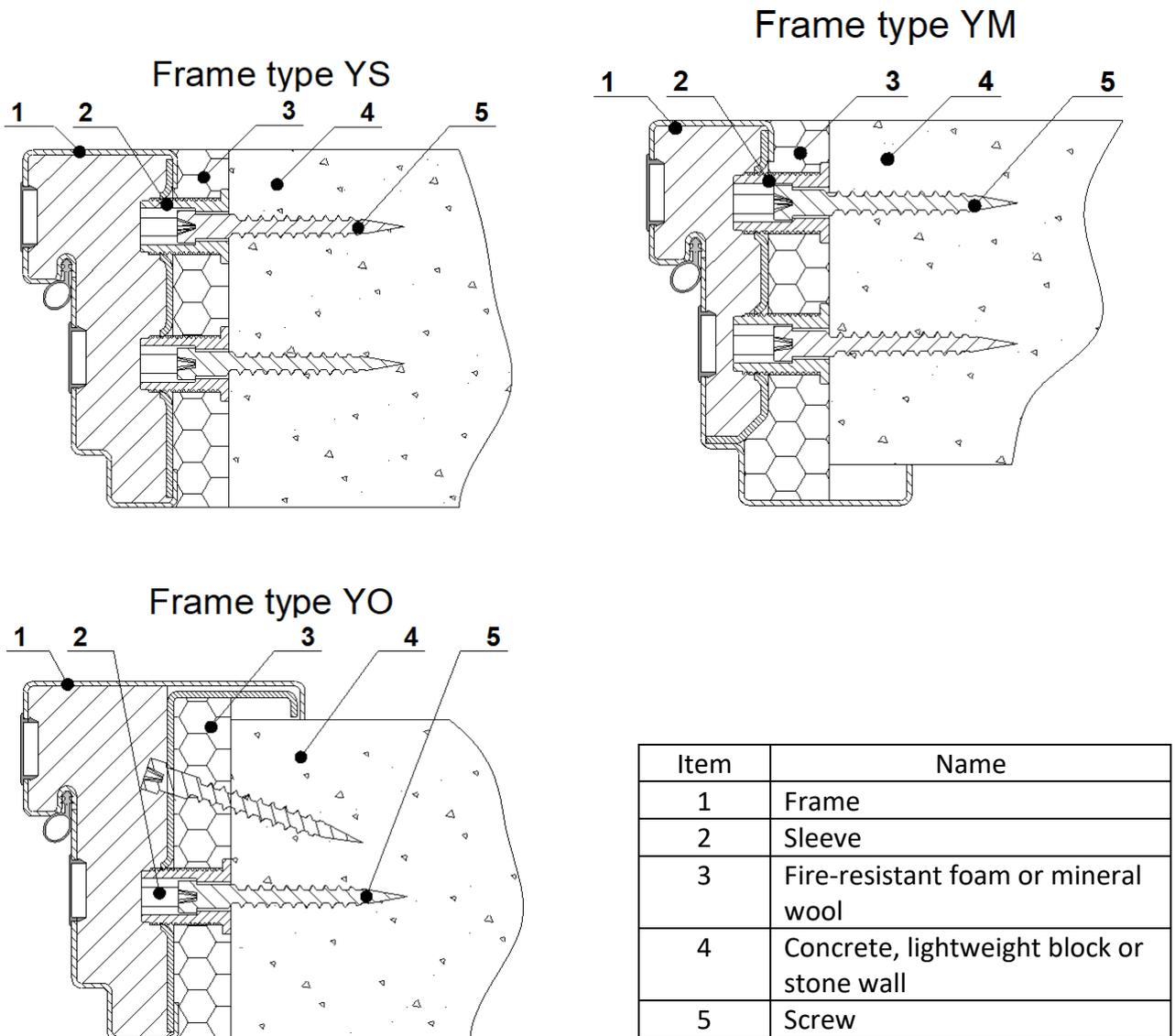
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Frame type YS

Frame type YM

Frame type YO

Item	Name
1	Frame
2	Sleeve
3	Fire-resistant foam or mineral wool
4	Concrete, lightweight block or stone wall
5	Screw

Figure 1. Fixing the door frame into a concrete, lightweight block or stone wall

Frame type YS

Frame type YM

Frame type YO

Item	Name
1	Frame
2	Sleeve
3	Cover trim
4	Fire-resistant foam or mineral wool
5	Gypsum board
6	Wooden stud or steel profile
7	Screw
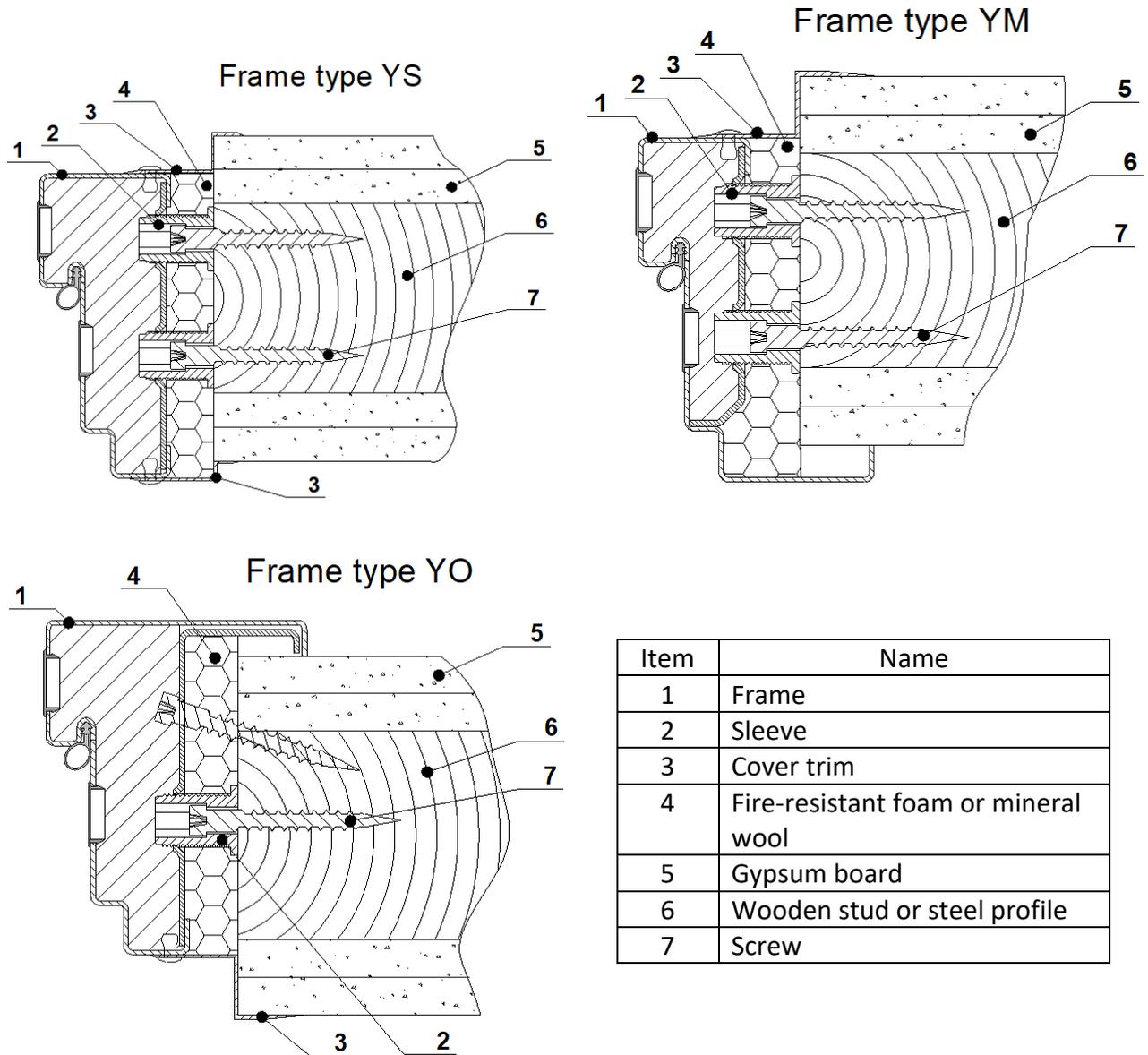
Figure 2. Fixing the door frame into gypsum board wooden frames

Frame type YS

Frame type YM

Frame type YO

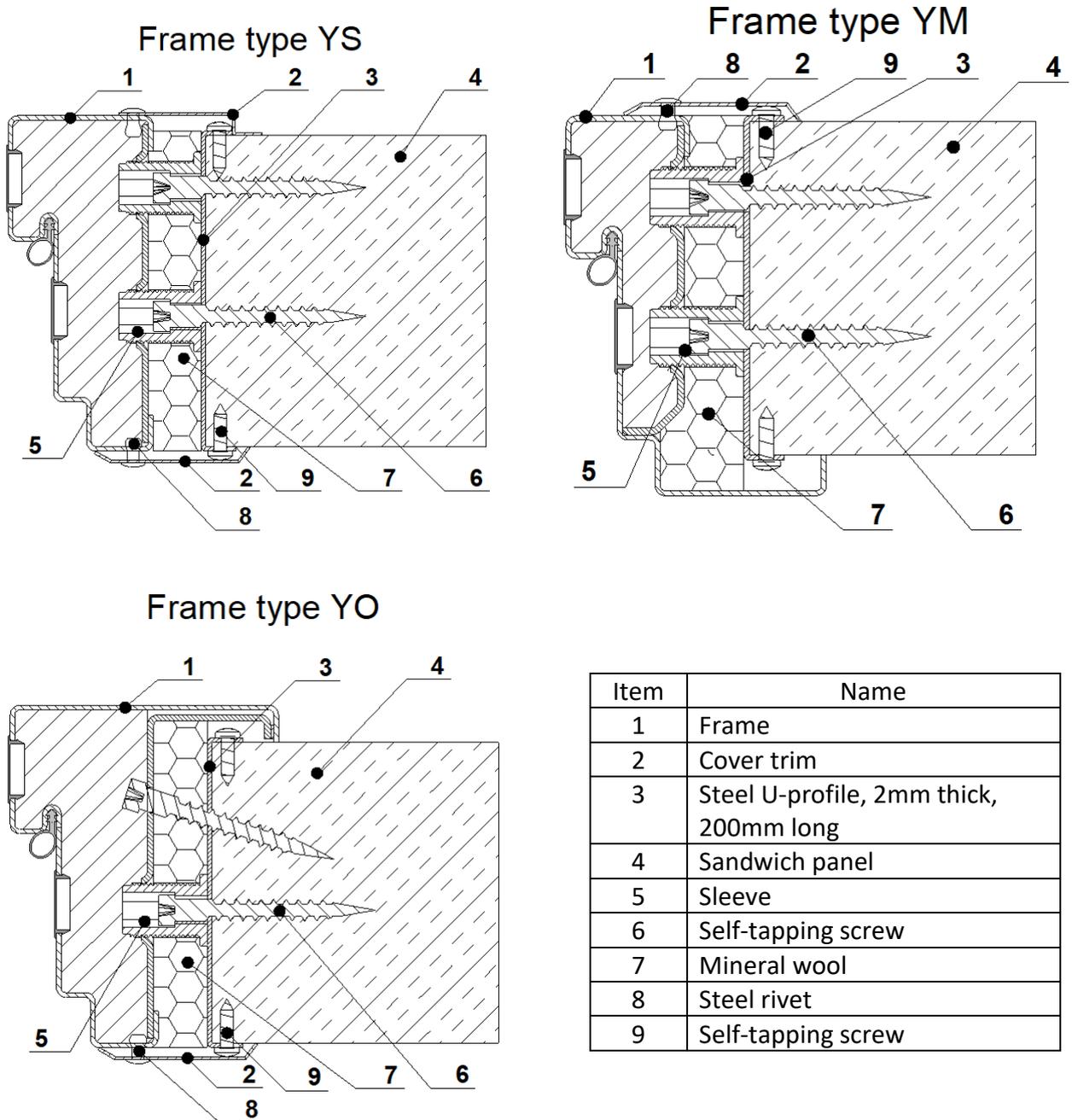| Item	Name
1	Frame
2	Cover trim
3	Steel U-profile, 2mm thick, 200mm long
4	Sandwich panel
5	Sleeve
6	Self-tapping screw
7	Mineral wool
8	Steel rivet
9	Self-tapping screw

Figure 3. Fixing the door frame into a sandwich panel

3 ORDER OF INSTALLATION

3.1 Make sure that all required fasteners, tools and additional materials are available.

3.2 Check the preparation of construction aperture.

    3.2.1 The construction aperture may not exceed the door frame width by more than 40 mm or the door frame height by more than 20 mm.

    3.2.2 For RC3 and RC4 doors, the construction aperture may not exceed the door frame width by more than 30 mm or the door frame height by more than 15 mm.

    3.2.3 If the limits are exceeded, the opening must be adjusted.

3.3 Ensure that the door frame and fasteners do not come into contact with any utilities running inside the wall.

3.4 For an exterior door frame that is assembled on site (Appendix 1. Door frame assembly on site), the joints must be sealed with silicone. Fix the threshold to the frame with a spring pin when the threshold tab height is under 10 mm; otherwise use a screw. The threshold joint located on the exterior side of the door seal must be silicone-sealed. Use fire-resistant sealants (for example, Soudal Fire Silicone B1F, DOWSIL Firestop 700 Sealant, Pyroplex Fire Rated Silicone Sealant).

3.5 Frame installation

    3.5.1 For openings without a threshold, remove the temporary profile (Appendix 2. Removal of the temporary threshold profile).

    3.5.2 Place the frame without the door leaf into the construction aperture.

    3.5.3 Ensure that the frame is supported under the side profiles to prevent the door from dropping later.

    3.5.4 Check the horizontal alignment of the frame base and/or the top profile.

    3.5.5 Support the threshold as close to the fastening point as possible to prevent bending when stepped on.

3.6 Fixing the frame

    3.6.1 Level the hinge-side of the frame and initially fasten the frame through fixing points 1, 2, and 3 (Figure 4).

    3.6.2 Adjust the sleeves against the support surface. When adjusting the sleeves, ensure the vertical alignment of the frame posts. The maximum sleeve extension from the frame surface is 15 mm. If the gap between the frame and the wall is larger, use non-flammable support blocks.

    3.6.3 When adjusting the frame using hexagonal steel sleeves (Adjufix frame screws), avoid overtightening them, as an overtightened steel sleeve may cause frame deformation.

    3.6.4 Use specified fasteners for ESSVE sleeves (1 Tools and fasteners).

    3.6.5 Measure the internal diagonals of the frame (Figure 5). The diagonal measurements may not differ by more than 1 mm.
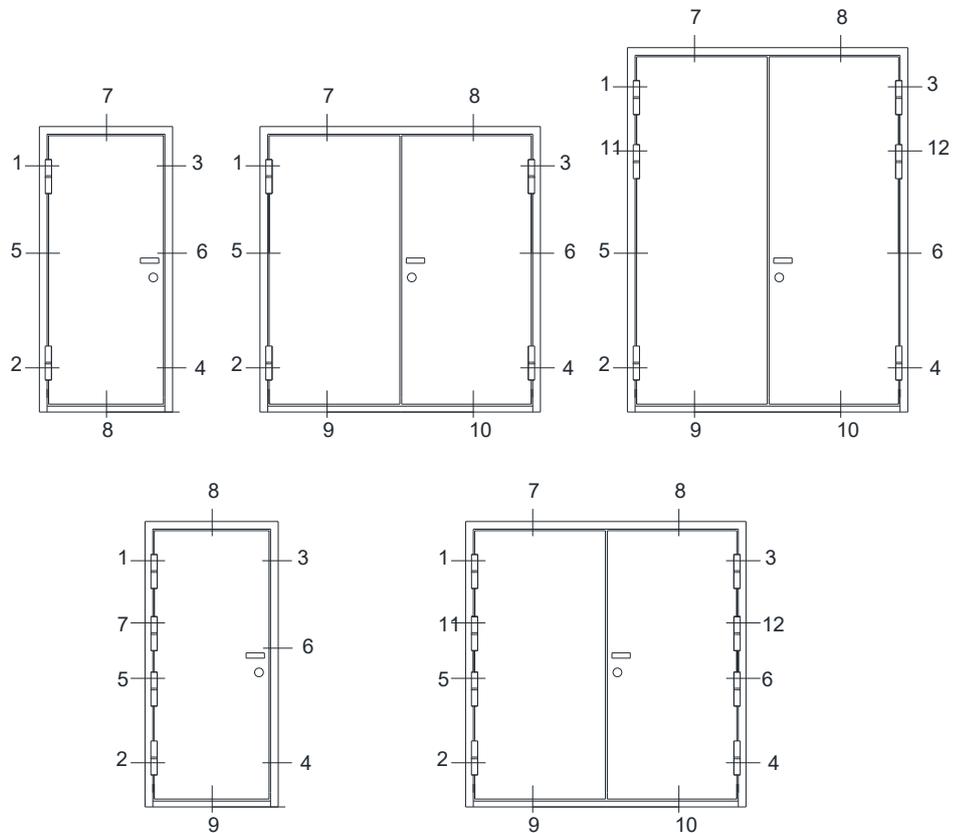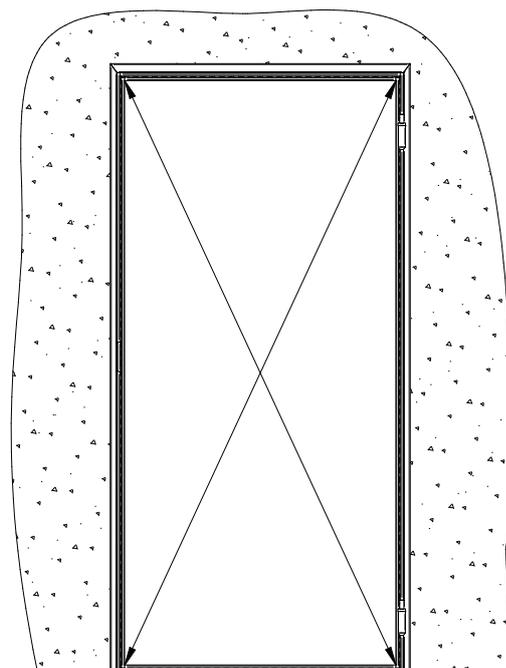
Figure 4. Frame fixing points

Figure 5. Internal diagonals of the frame

3.7   Door leaf installation

3.7.1   Make sure the hinges are lubricated using a solid lubricant. Lubricate if necessary.

3.7.2   Lift the door leaf on the hinges.

3.7.3   Check that the gap between the door leaf and the frame is the same width all around.

3.7.4   Check that the exterior face of the door is flush with the frame.

3.7.5   Fasten with a screw through fixing point 4 (Figure 4).

3.7.6   Fasten the frame at all remaining fixing points and repeat step 3.6.3.
-      The gap must be at least 3 mm and not greater than 5 mm (Figure 6). If necessary, loosen the fixing screws and adjust the sleeves with a hex key.

3.7.7   Tighten the fixing screws.

3.7.8   Cover the frame fixing points with plastic caps.
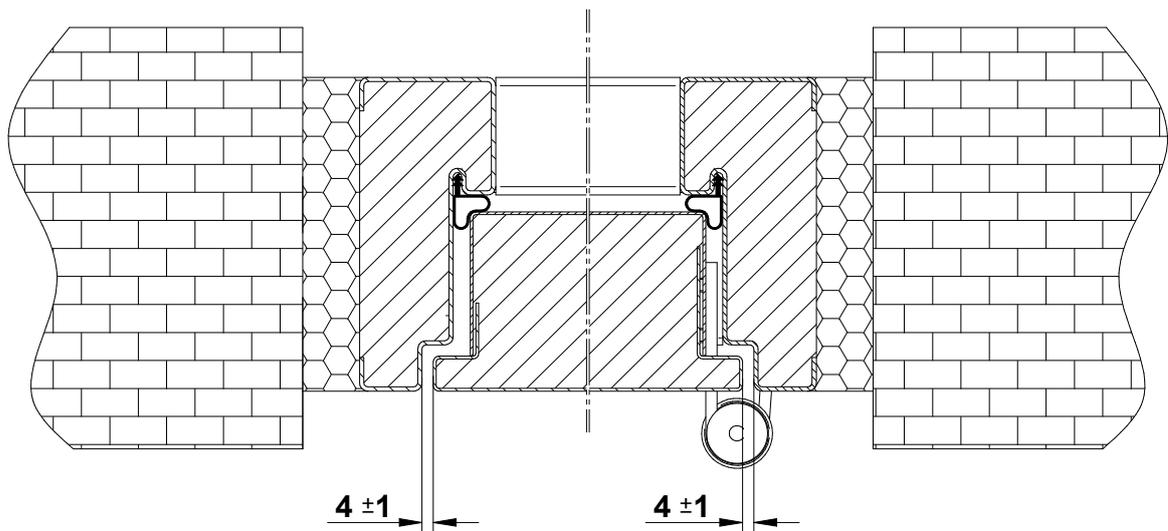
Figure 6. Gap tolerances between the door leaf and the frame

4 FILLING THE GAP BETWEEN THE FRAME AND THE WALL. FINISHING.

4.1 Fire resistance classes EI30 and EI60

4.1.1 Fill the gap with fire-resistant foam (SOUDAFOAM FR, PENOSIL Premium FireRated Gunfoam) or with mineral wool with a density of ≥ 80 kg/m³.

4.1.2 In some cases, one gap may be filled with fire-resistant foam and the other gap with mineral wool. Do not use both materials in the same gap.

4.1.3 For gaps measuring between 20 mm and 35 mm, use mineral wool with a density of ≥ 150 kg/m³ and coat the visible surface of the mineral wool with Soudal Fire Silicone B1F.

4.2 For fire resistance class EI120, fill the gaps between the frame and the wall with mineral wool with a density of ≥ 80 kg/m³.

4.3 After sealing the gaps, ensure the door opens and closes freely.

4.4 Cover the filled gaps with a construction board, plaster, or a metal trim fixed with rivets spaced 500 mm apart. Gaps sealed with mineral wool must be coated with sealant.

4.5 Sealing of exterior doors

4.5.1 Seal the gaps between the threshold and the floor with sealant (Soudal Soudaflex 40FC, Soudal Silirub 2/S, or Penosil General Silicone). Seal both the interior and exterior edges.

4.5.2 For YM frame type with a wall-covering trim, seal the gaps between the wall and the frame on the exterior side.

5 HARDWARE INSTALLATION

5.1 Install the lock hardware following the manufacturer's installation instructions. Do not remove the mineral wool blocks located at the sides of the lock mortise.

5.2 For doors with security classes RC3 and RC4, ensure that the lock cylinder's security class according to EN 1303 (digit 7) matches the door's security class. For RC3 doors, at least grade 4 is required; for RC4 doors, at least grade 6 is required.
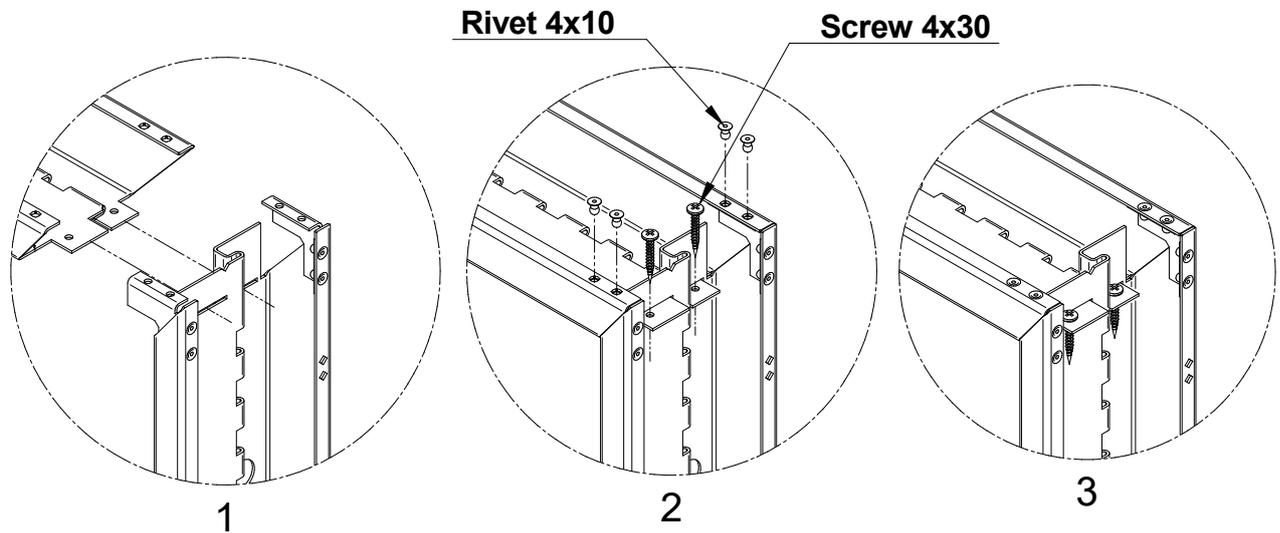
6 FINAL CHECK

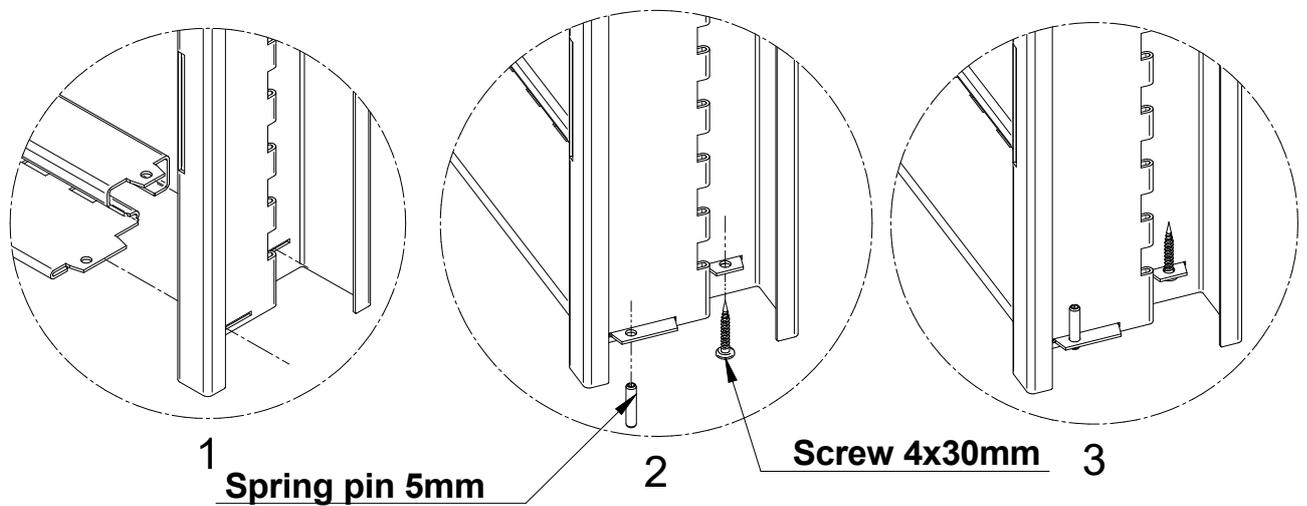6.1 Verify the door set and ensure all accessories operate correctly.

6.2 Check the operation of the door closer and adjust it if necessary, following the closer manufacturer's instructions.
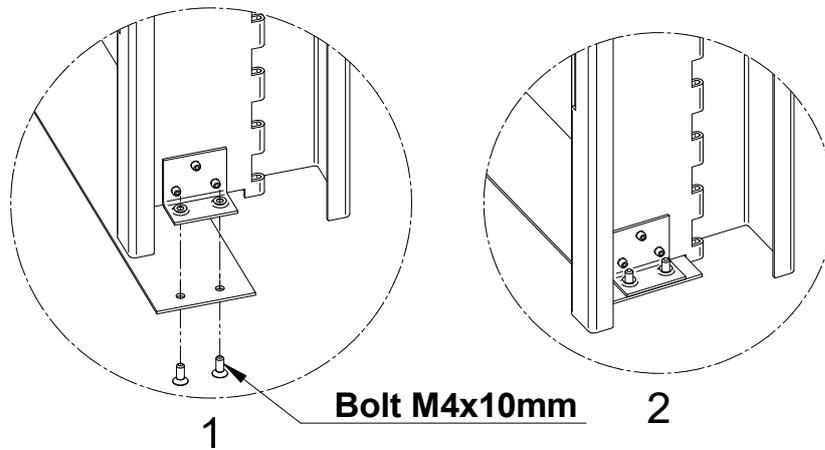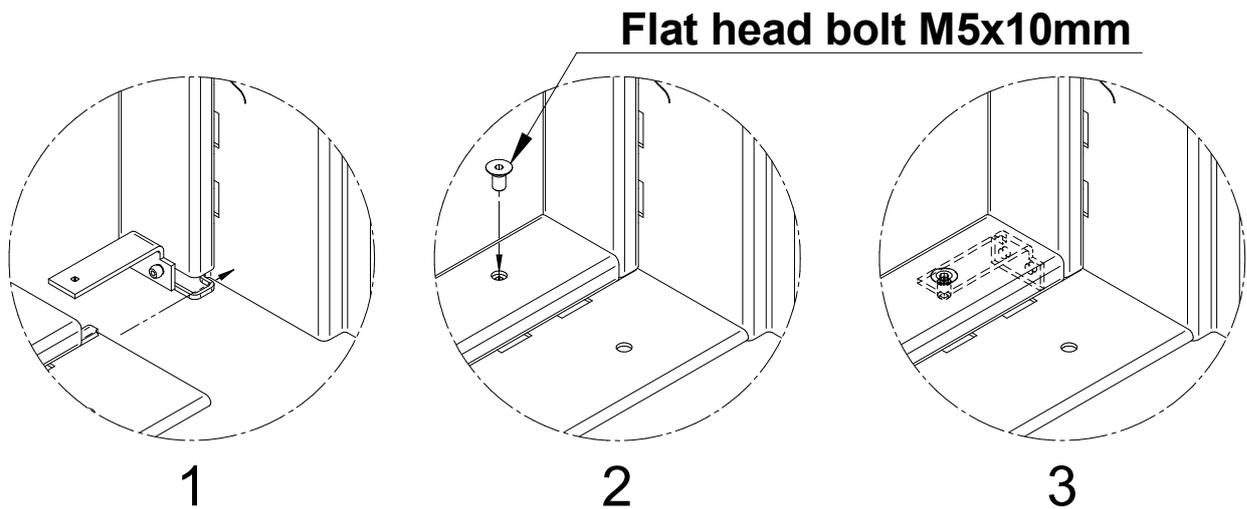
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APPENDIX 1. DOOR FRAME ASSEMBLY ON SITE

Rivet 4x10   **Screw 4x30**

1   2   3

Figure 7. Door frame corner connections

1   **Spring pin 5mm**   2   **Screw 4x30mm**   3

Figure 8. Threshold with dowel joints

Bolt M4x10mm

1   2

Figure 9. Fixing the threshold with bolts

Flat head bolt M5x10mm

1   2   3

Figure 10. Removal of the removable threshold

APPENDIX 2. REMOVAL OF THE TEMPORARY THRESHOLD PROFILE

1   2   3
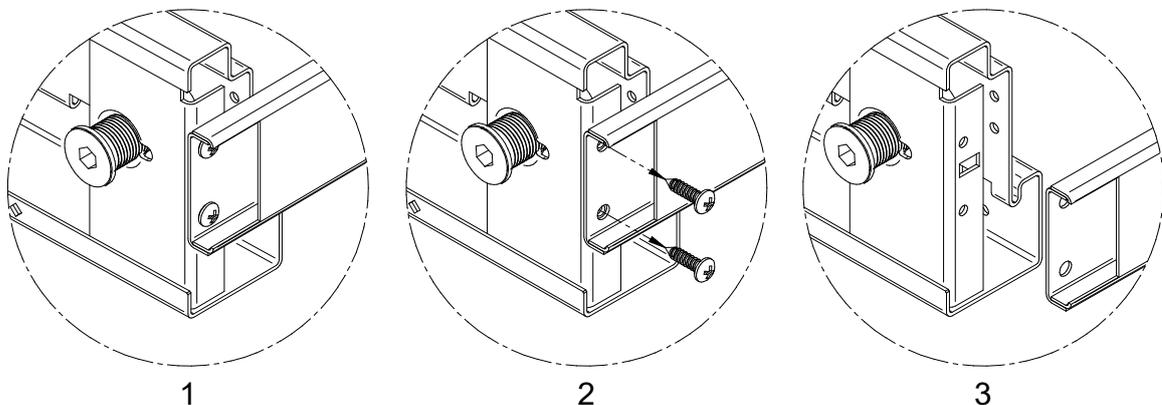
Figure 11. Removal of the temporary threshold profile