



PRO/PRO+ SYSTEM assembly instructions



1. Preparing for installation

When installing the Warmotech PRO/PRO+ system, you will need the following equipment and tools:

- Warmotech PRO/PRO+ system profiles
- Screws for fastening
- Wood screws for fastening standard profile joints
- Adhesive
- Utility knife
- Cleaning brush
- Measuring tools (tape measure, laser, etc.)
- Construction pencil/marker
- Drill
- TORX drill bit
- Impact drill
- Hammer drill
- Disk saw
- Sealant gun
- Adhesive dispensing nozzle
- Spatula
- Spirit level (laser or other leveling tool)
- Protective work equipment (protective goggles, gloves, etc.)



2. Wall preparation

Before starting the installation of the PRO/PRO+ system, assess the condition of the wall, foundation and lintel surface.

In case of larger uneven sections in the wall, level out wall imperfections.

Wipe away any plaster, glue, or other residues. Clean any old, deteriorated surface down to a solid base. Make sure there is no debris that could prevent the profile from sticking to the wall.

It is recommended to clean the wall with a dry or damp brush in areas where profiles will be glued.



3. Preparing the profile for installation

Start the installation by preparing and mounting the bottom profile.

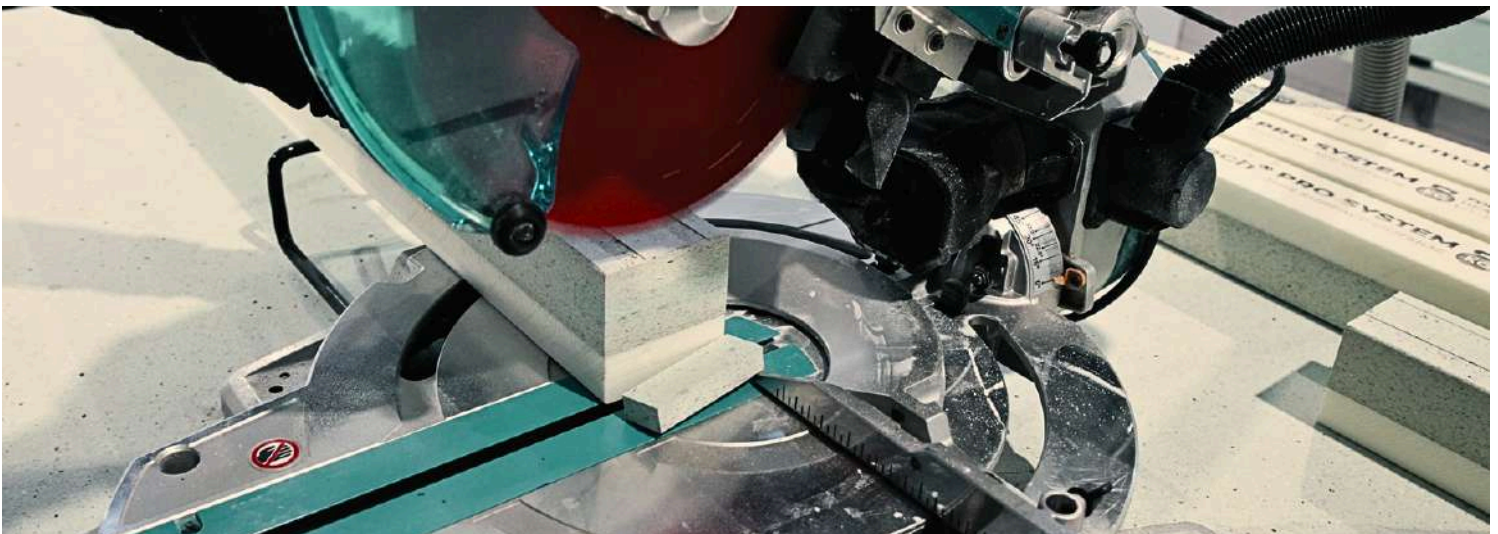
Bottom profile has to be 160 mm longer than the width of the window opening.

Measure the width of the window opening and add 80 mm for both sides of the bottom profile (fig. 3.1). Make 80 mm mark on the profile.



(fig. 3.1)

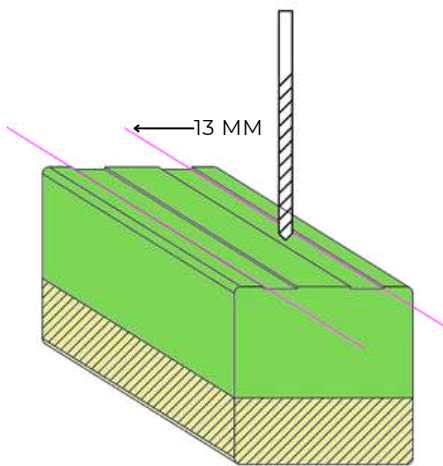
Cut the profile to the measured length. Cut off the unnecessary first joint of the profile to make a square edge.



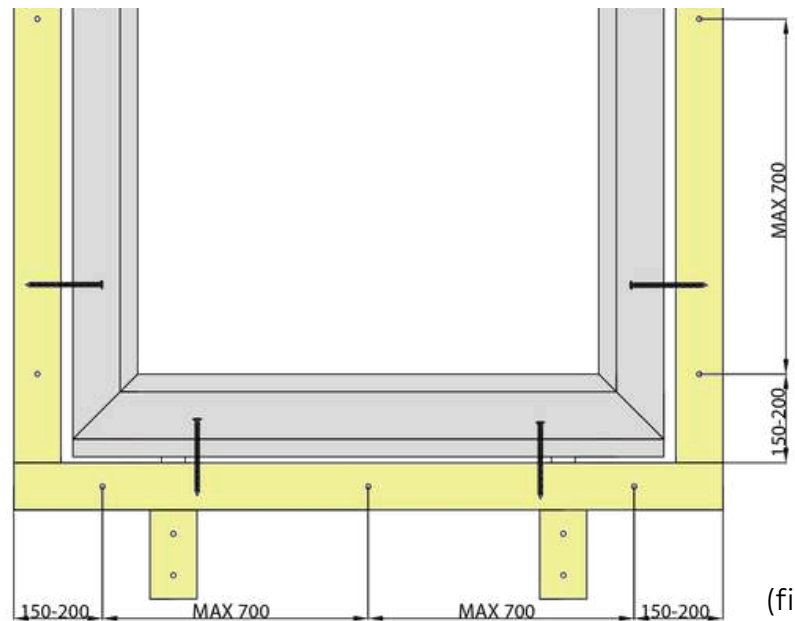
Before securing the Warmotech PRO/PRO+ system profiles to the wall, holes have to be drilled for fastening the screws.

For profile drilling, use an 8 mm diameter drill bit suitable for metal or wood. Make sure to form holes at least 13 mm away from the edges of the profile (fig. 3.2).

Holes have to be drilled 150-200 mm from both ends of the profile. The distance between other holes should not exceed 700 mm (fig. 3.3).



(fig. 3.2)



(fig. 3.3)

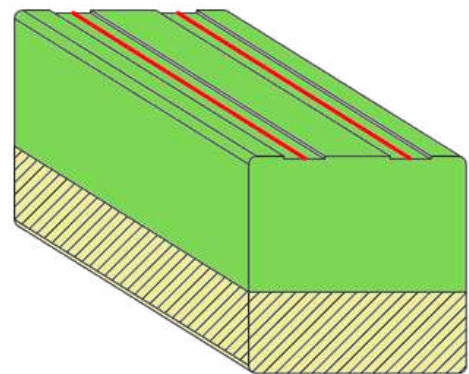


Before attaching profiles to the wall, prepare adhesive by placing it into a sealant gun, cutting open the adhesive packaging and fitting a dispensing nozzle. Use a utility knife to create a notch at the tip of the nozzle.

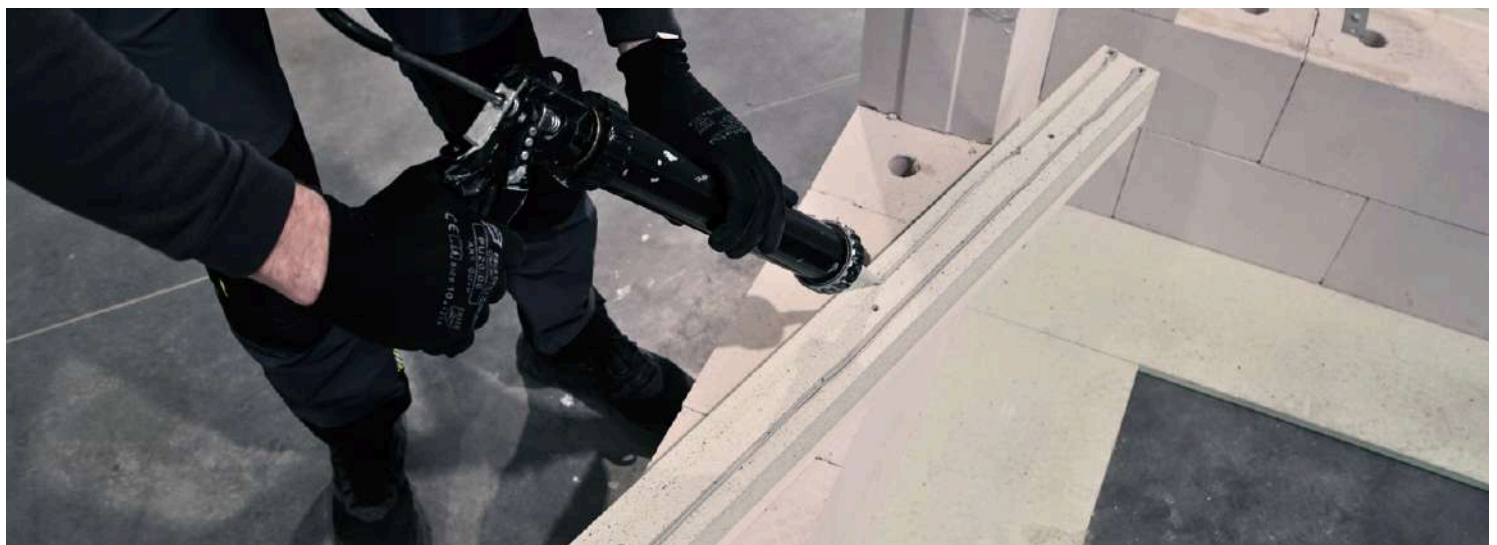


Apply adhesive in two strips along the entire length of the profile. There are two routed grooves for guidance at the back of the profile (fig. 3.4).

Under optimal conditions, the adhesive yield is 100 ml per meter of profile, meaning one 600 ml package will cover approximately six meters of profile. If the wall is uneven, the adhesive usage may be greater.



(fig. 3.4)



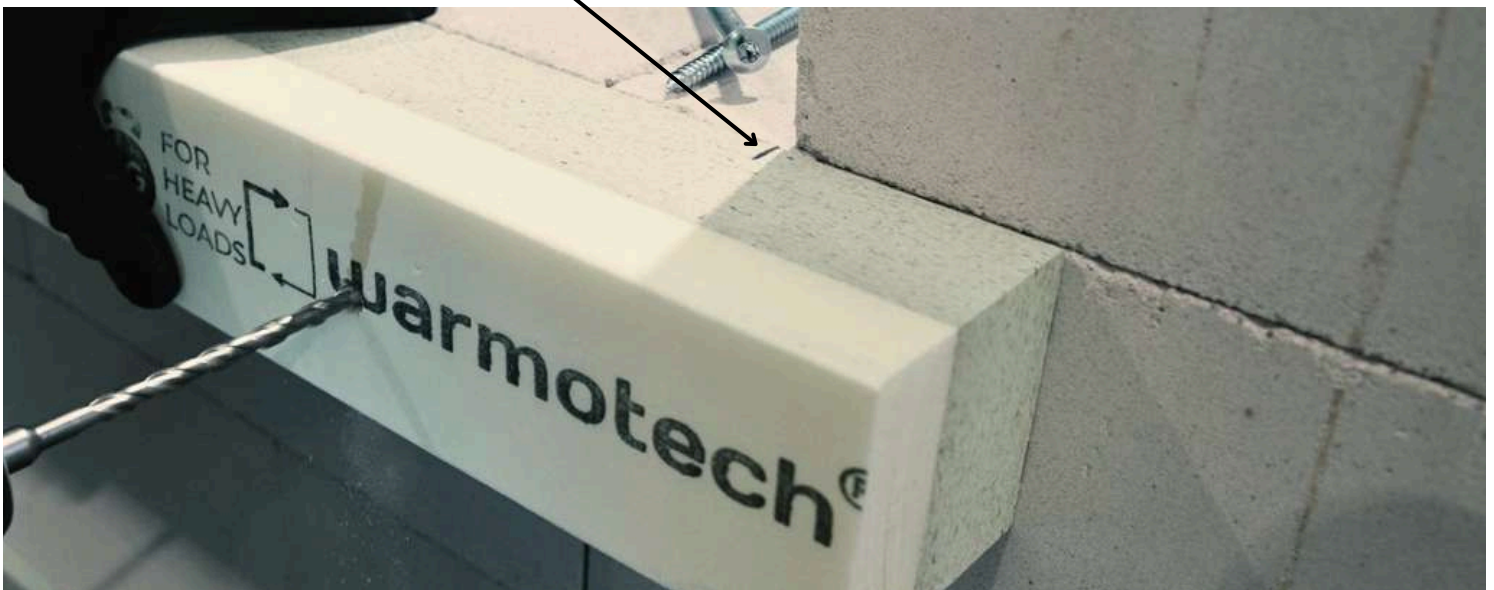
4. Fastening the profile to the wall

Press the profile against the wall and gently move it to distribute the adhesive.



Before drilling the wall, make sure that the 80 mm mark is placed alongside the edge of the window opening.

80 mm MARK



First, drill wall through the profile and fasten one point with the screw.

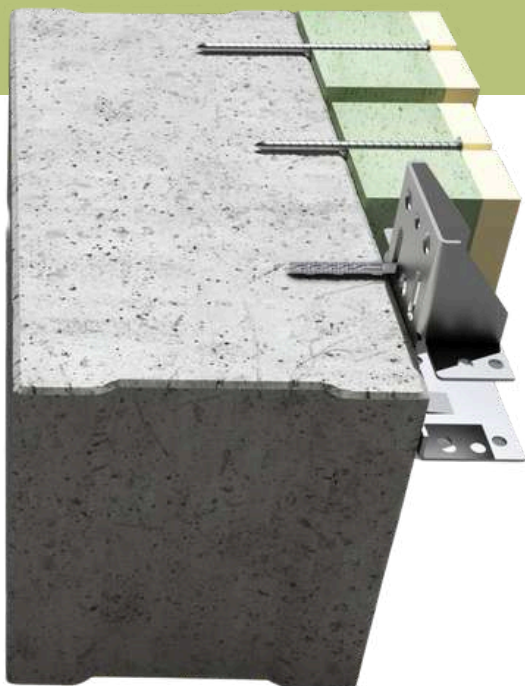


Use a spirit level to ensure the profile is leveled correctly. Then, drill through the remaining holes into the wall and secure the profile with screws.



5. Recommendations for profile fastening

PRO and PRO+ system profiles are installed with SFS Intec FB-FK-T30 screws. Below are recommendations for fastening screws according to different types of walls.

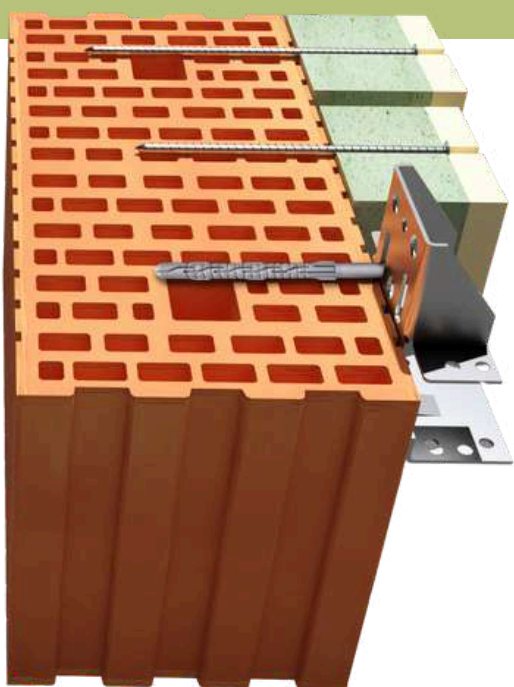


REINFORCED CONCRETE BLOCK (wall, foundation, lintel)

- Use a concrete drill bit with a diameter of 6.5 mm and a hammer function for drilling.
- The minimum length of the screw in reinforced concrete is 60 mm.
- Minimum screw lengths according to Warmotech PRO/PRO+ system type:

PRO SYSTEM	PRO+ SYSTEM
PRO 70/80 - 122 mm PRO 90/100 - 152 mm	PRO+ 70/80/90 - 122 mm PRO+ 100 - 152 mm

- Screws are fastened using a drill with hammer function and the tool's maximum torque.



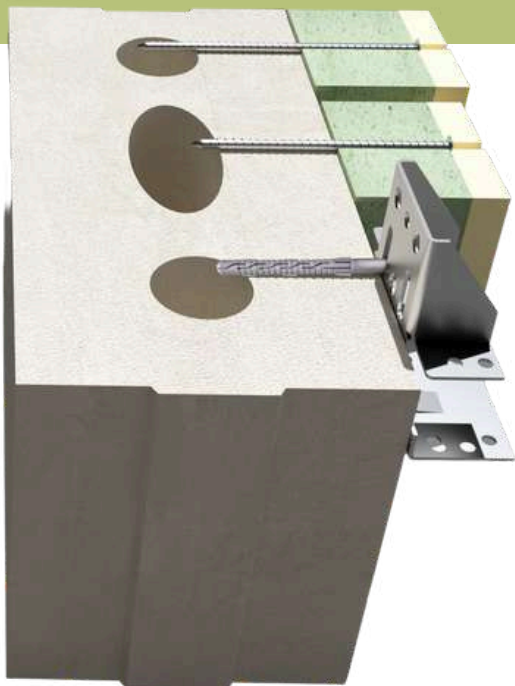
CERAMIC BLOCK

- Use a concrete drill bit with a diameter of 5.0 mm for drilling (with or without hammer function).
- The minimum length of the screw in ceramic block is 120 mm.
- Minimum screw lengths according to Warmotech PRO/PRO+ system type:

PRO SYSTEM	PRO+ SYSTEM
PRO 70/80 - 182 mm PRO 90/100 - 212 mm	PRO+ 70/80/90 - 182 mm PRO+ 100 - 212 mm

- Screws are fastened using a drill with or without hammer function and the tool's minimum torque.
- When attaching bottom profiles to this type of blocks, it is necessary to install supports (see 8. Support installation).

SILICATE BLOCK



- Use a concrete drill bit with a diameter of 6.5 mm for drilling (with or without hammer function).
- The minimum length of the screw in silicate block is 90 mm.
- Minimum screw lengths according to Warmotech PRO/PRO+ system type:

PRO SYSTEM	PRO+ SYSTEM
PRO 70/80 - 152 mm PRO 90/100 - 182 mm	PRO+ 70/80/90 - 152 mm PRO+ 100 - 182 mm

- Screws are fastened using a drill with or without hammer function and the tool's maximum torque.

CERAMSITE BLOCK (expanded clay block)

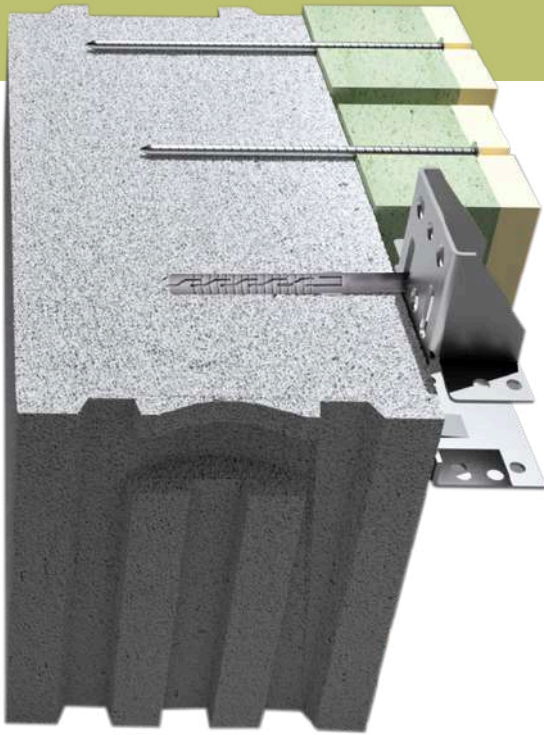


- Use a concrete drill bit with a diameter of 5.0 mm for drilling (with or without hammer function).
- The minimum length of the screw in ceramsite block is 120 mm.
- Minimum screw lengths according to Warmotech PRO/PRO+ system type:

PRO SYSTEM	PRO+ SYSTEM
PRO 70/80 - 182 mm PRO 90/100 - 212 mm	PRO+ 70/80/90 - 182 mm PRO+ 100 - 212 mm

- Screws are fastened using a drill with or without hammer function and the tool's minimum torque.
- When attaching bottom profiles to this type of blocks, it is necessary to install supports (see 8. Support installation).

AERATED CONCRETE BLOCK



- The block should not be drilled.
- The minimum length of the screw in gas silicate block is 120 mm.
- Minimum fastener lengths according to Warmotech PRO/PRO+ system type:

PRO SYSTEM	PRO+ SYSTEM
PRO 70/80 - 182 mm PRO 90/100 - 212 mm	PRO+ 70/80/90 - 182 mm PRO+ 100 - 212 mm

- Screws are fastened using drill with or without hammer function and the tool's minimum torque.
- It is advisable to apply a deep primer to gas silicate blocks.
- When attaching bottom profiles to this type of blocks, it is necessary to install supports (see 8. Support installation).

Additional notes:

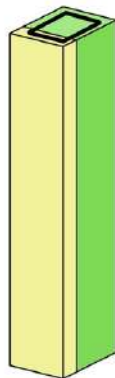
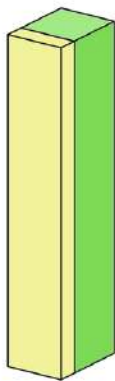
- If the screw over-torques while attaching the profile to the wall, drill a new hole in the profile and re-fasten it.
- If the wall blocks are drilled too close to the edge of the window opening - the blocks might crack. Evaluate the distance before drilling.
- Assess the quality of the blocks before drilling, make sure to follow any recommendations of your block manufacturer.
- Instructions for drilling and screw fastening are of a recommendatory nature. Always assess your actual wall situation.
- The diameter of the drill and the hammer function should be selected based on the recommendations as well as an assessment of the wall's quality and conditions.

6. Connecting PRO/PRO+ system profiles

Warmotech PRO and PRO+ system profiles can be connected by joints. Profiles feature three different types of joints (fig. 6.1). To ensure airtightness, apply adhesive to the joints of the locks. Sealing is not required for dovetail joints.

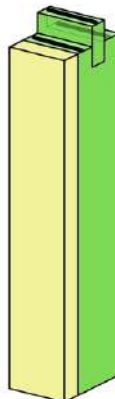


Square edge



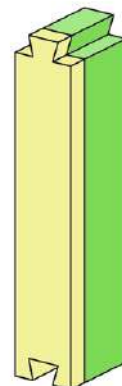
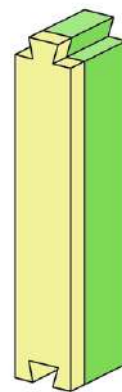
Adhesive application
example

Standard joint



Adhesive application
example

Dovetail joint



Adhesive is not
required

(fig. 6.1)

Additionally strengthen the standard profile connection joint with 4.5x60 mm wood screws (for outdoor use).

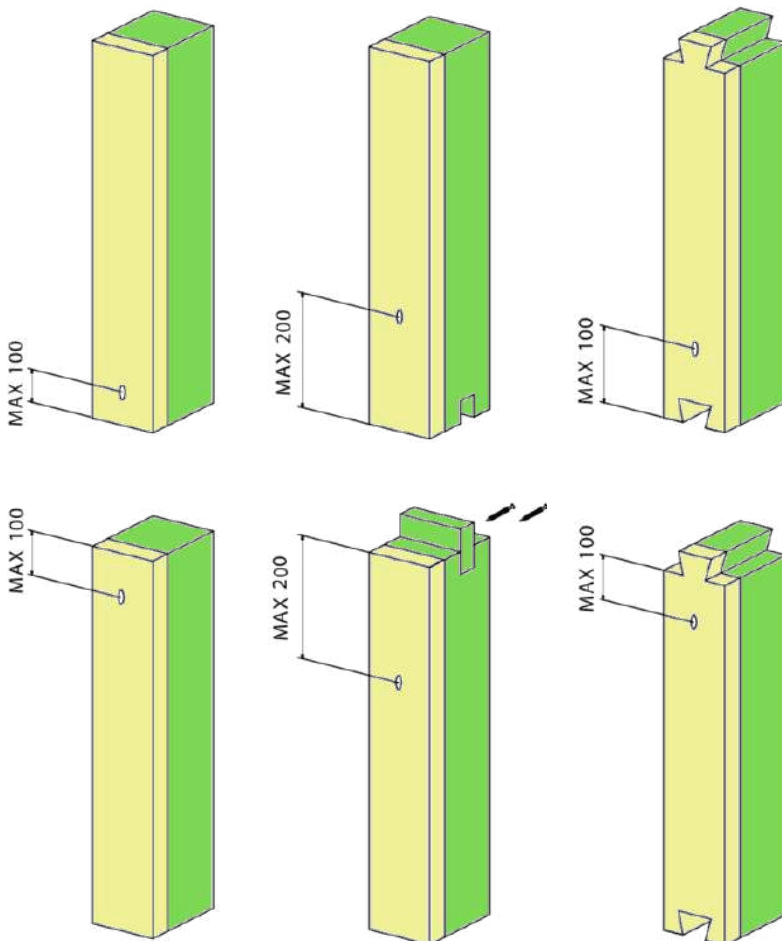
If the element is assembled from multiple profiles, drill holes near the joints (for wall fastening) following the instructions below. (fig. 6.2).



Square joint

Standard joint

Dovetail joint



(fig. 6.2)

For profiles without a joint, it is advisable to drill fastening holes no more than 100 mm from the connection point.

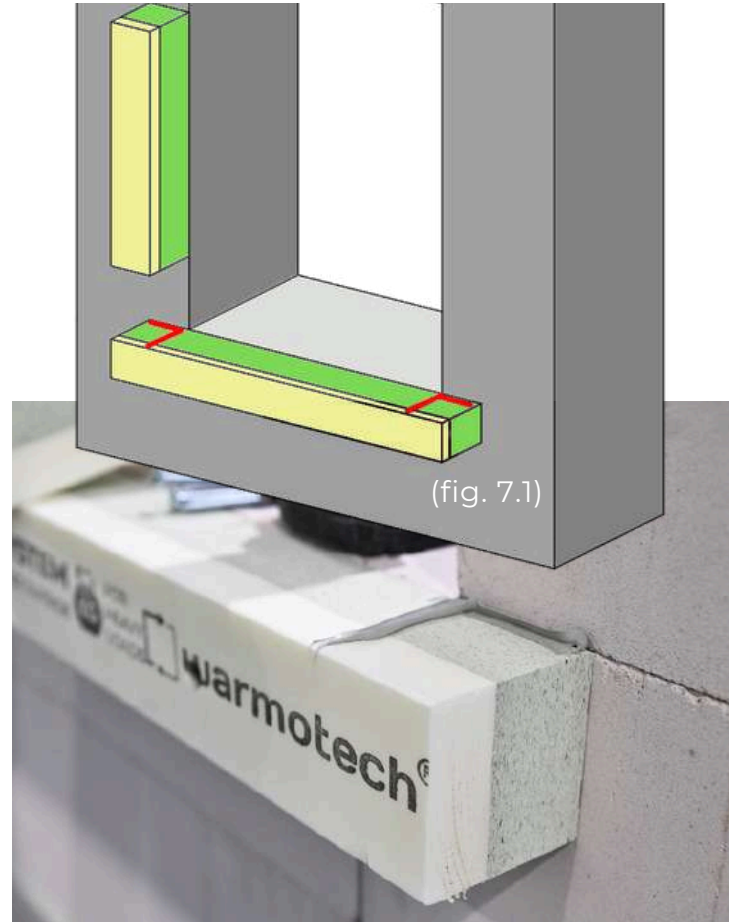
For profiles with a standard joint, it is advisable to drill fastening holes no more than 200 mm from the connection point.

For profiles with a dovetail joint, it is advisable to drill fastening holes no more than 100 mm from the connection point.

7. Side and top profile assembly

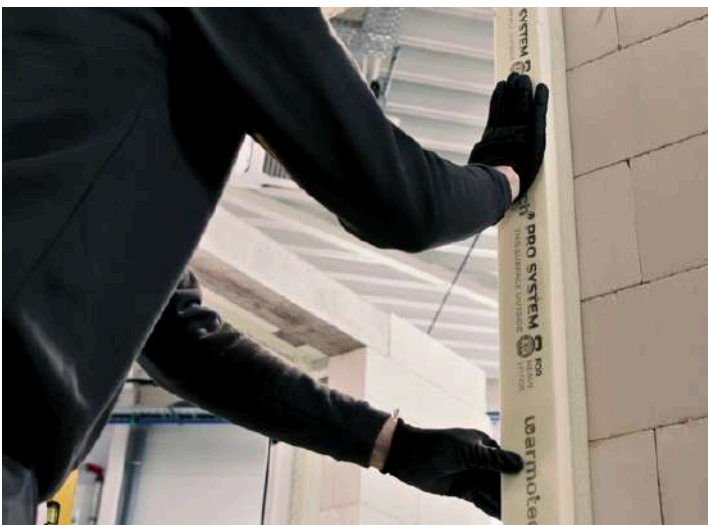
Measure the height of the window opening. Typically, the height is consistent on both sides of the opening. Cut the profiles to the measured length, then drill holes and apply adhesive following the previous recommendations.

Apply adhesive to the connection (corner) of the side and bottom profiles (fig. 7.1).



Attach the profile to the wall and press it firmly. Gently move the profile to distribute adhesive.

Use a spirit level to adjust profile's vertical alignment.



Drill the wall through the hole in the profile and secure it with a screw.

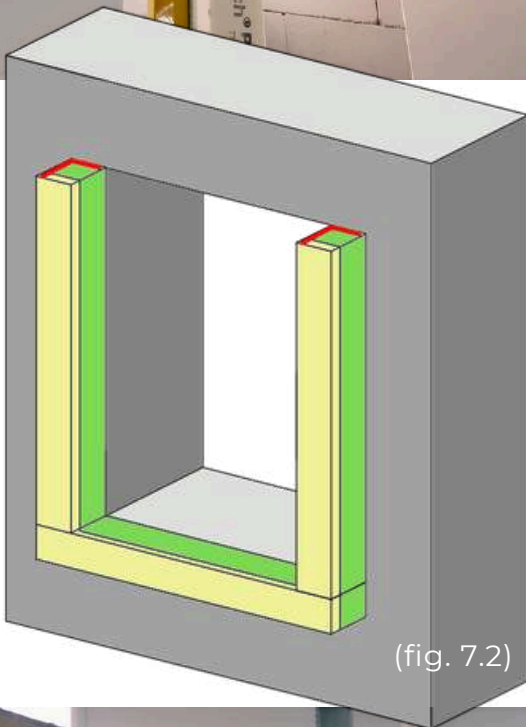
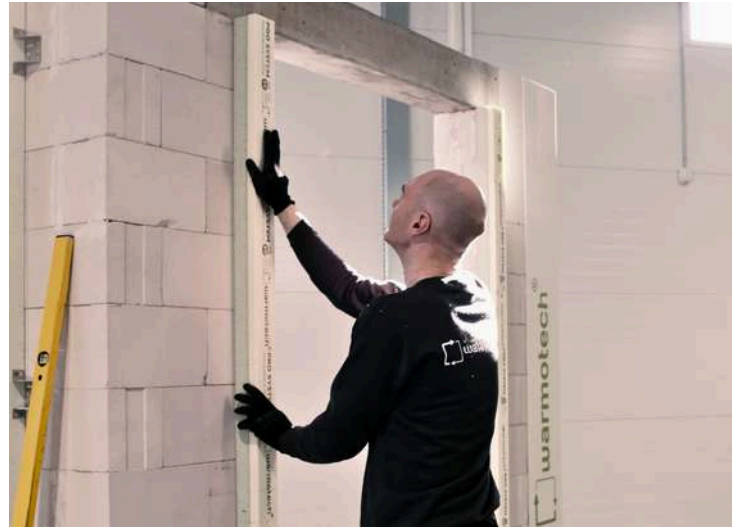
It is recommended to fasten the bottom part of the profile first to avoid any gaps.



Drill through the remaining points of the profile and secure them with screws.



Repeat the same steps on the other side of the window opening.

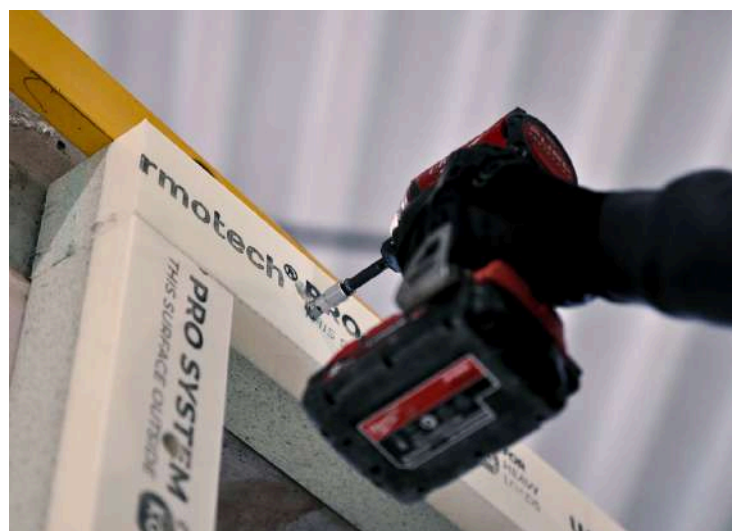


(fig. 7.2)

Measure the length of the top profile from the outer borders of the side profiles. Apply adhesive to the connections of the side and top profile (fig. 7.2).

Prepare the top profile for installation by following the previously explained steps - cut, drill, apply adhesive.

Drill lintel through the holes formed in the profile. Fasten the profile to the lintel with screws.



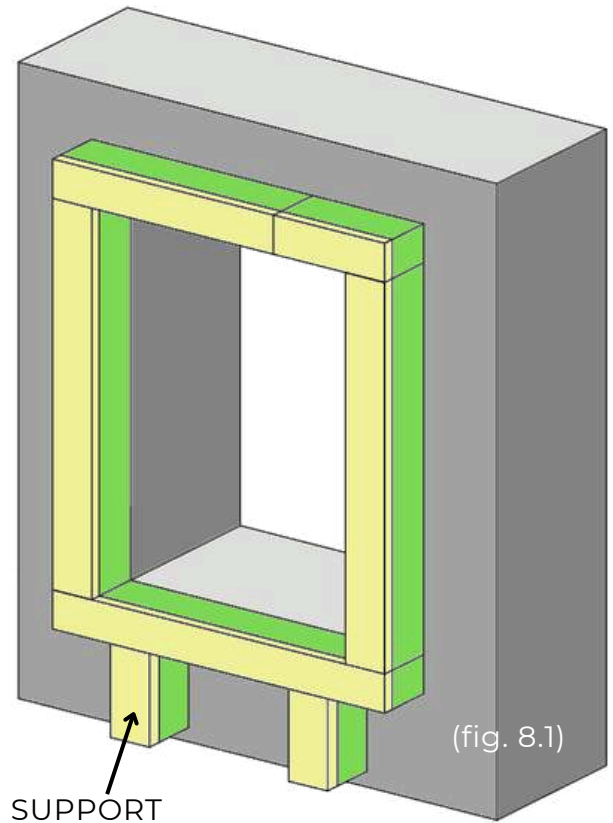
8. Support installation

Supports must be installed if the wall behind the bottom profile is constructed from ceramic, expanded clay, or aerated concrete blocks.

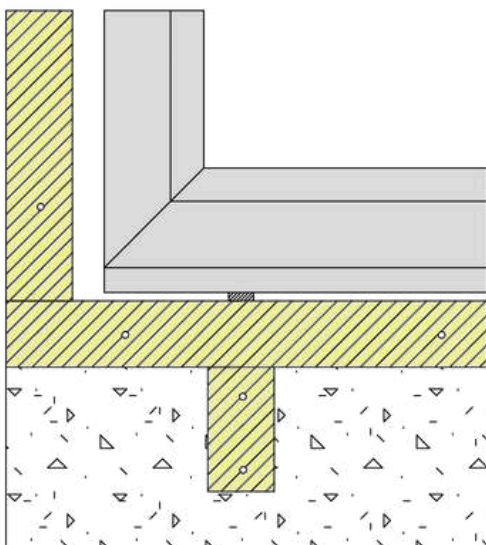
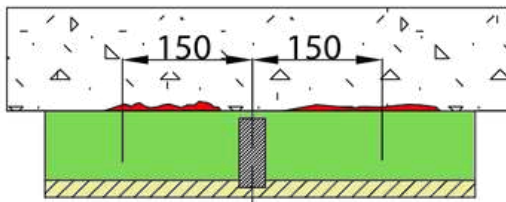
For other types of walls supports must be installed under the bottom profile if the wall surface is uneven or bumpy at the points of window load (fig. 8.1)(see 11. Examples of properly installed system).

If there are irregularities or gaps between the attached profile and the wall within 150 mm in both directions from the window mullion, additional supports must be installed to reinforce the structure (fig. 8.2).

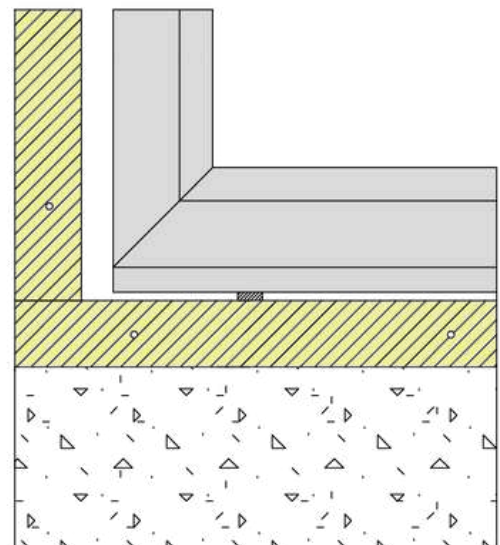
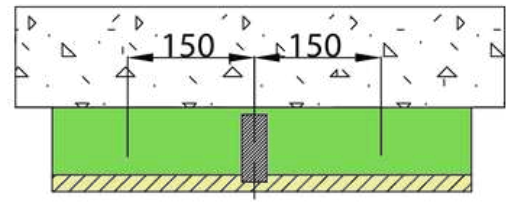
Assess whether supports are needed in your case.



UNEVEN SURFACE -
INSTALLATION OF SUPPORTS IS NECESSARY



SMOOTH SURFACE -
INSTALLATION OF SUPPORTS IS NOT REQUIRED



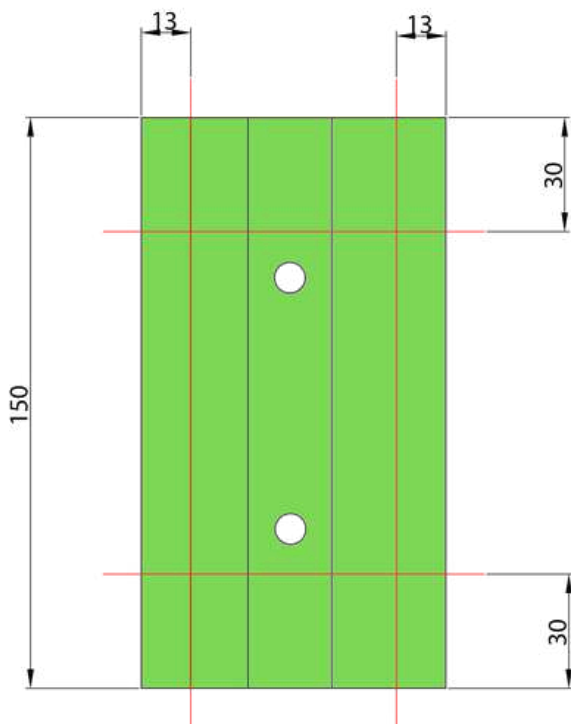
(fig. 8.2)

Create supports by cutting the profile to 150 mm elements.



Before attaching supports to the wall, drill two holes in each support for screw fastening. Apply adhesive in two strips along the entire length of support. Press support to the wall, gently move it to distribute adhesive. There should be no gaps between the bottom profile and the support. Drill wall through the holes in the supports and secure them with screws.

Holes for screws should be formed no closer than 13 mm from the edges of the profile and no closer than 30 mm from the ends of the profile (fig. 8.3).

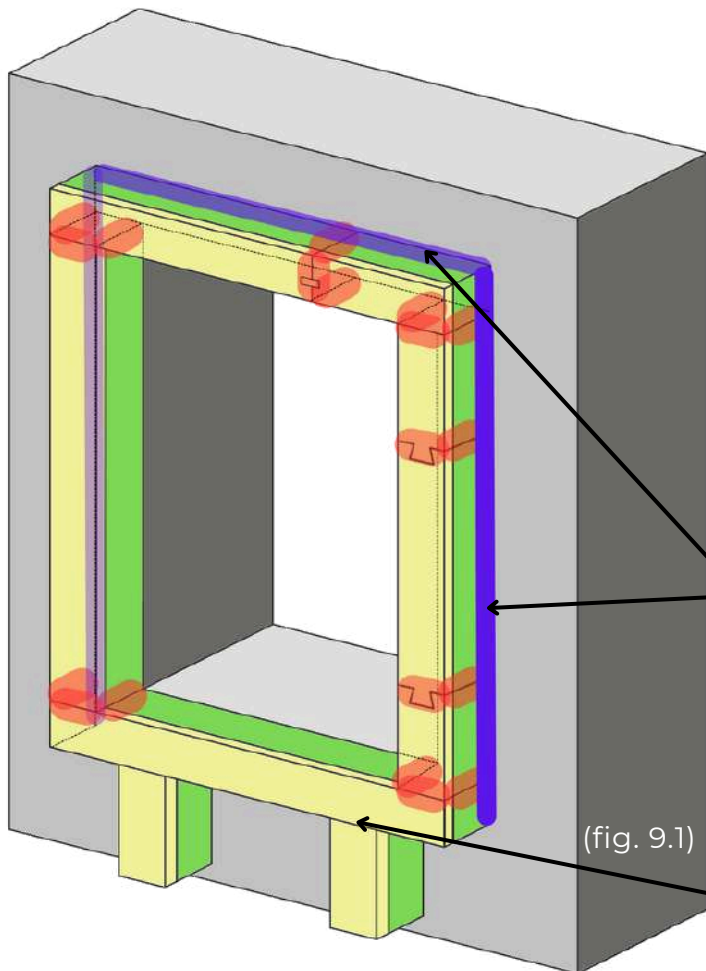


(fig. 8.3)





9. Finalising the installation

Once the profiles are installed, apply adhesive to all joints and connections to ensure a tight seal. If there are any irregularities or visible gaps, apply additional layer of adhesive.



(fig. 9.1)

-  Mandatory application of adhesive
-  Recommended application of adhesive

All profile connection points must be coated with adhesive (fig. 9.1):

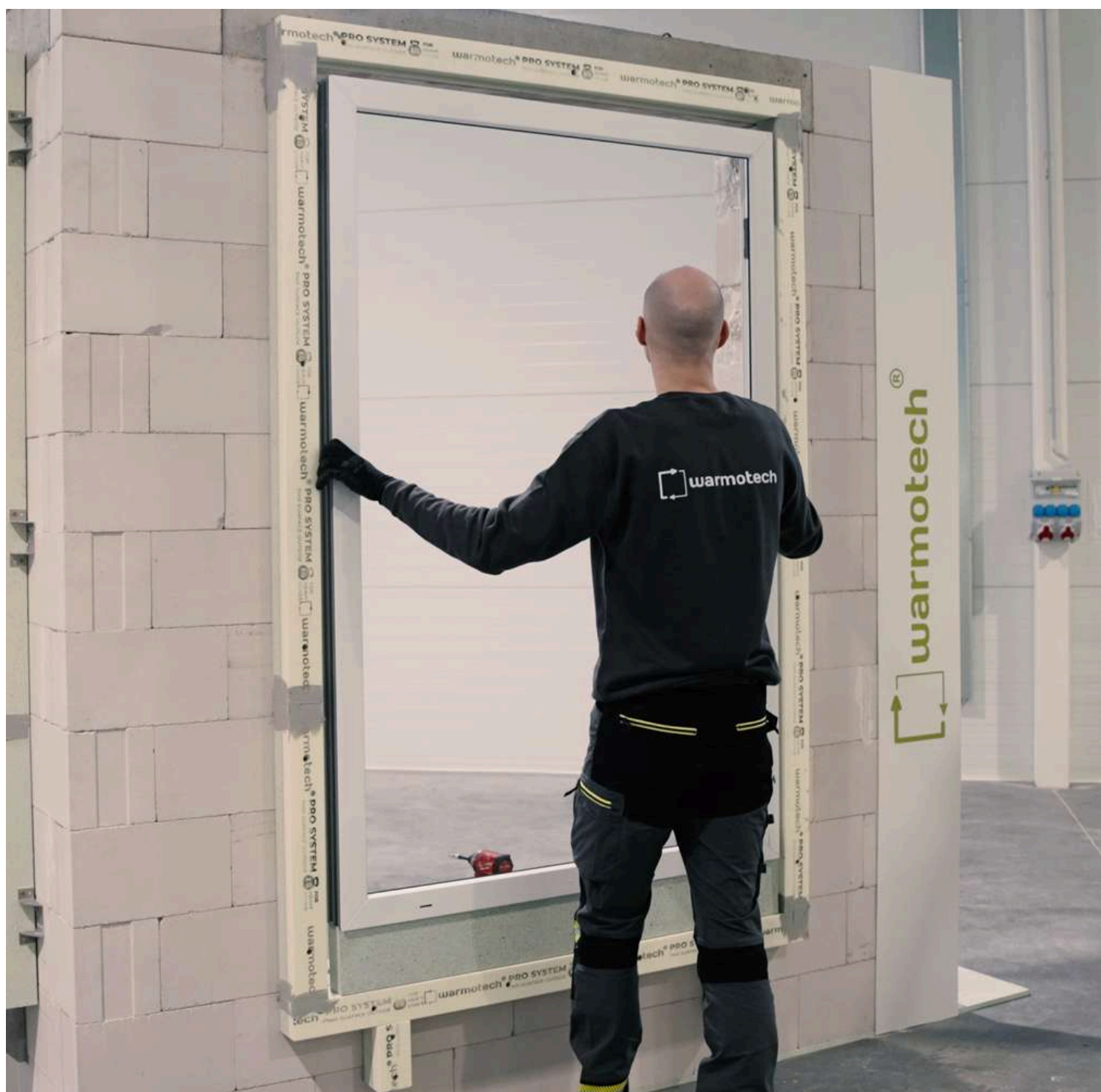
- corner connections;
- connections with all types of joints.

It is advisable to apply glue to the connections between the profiles and the walls at the top and sides. This sealing is recommended to protect against weather conditions, such as rainwater, until the insulation and finishing layer of the building's façade are installed.

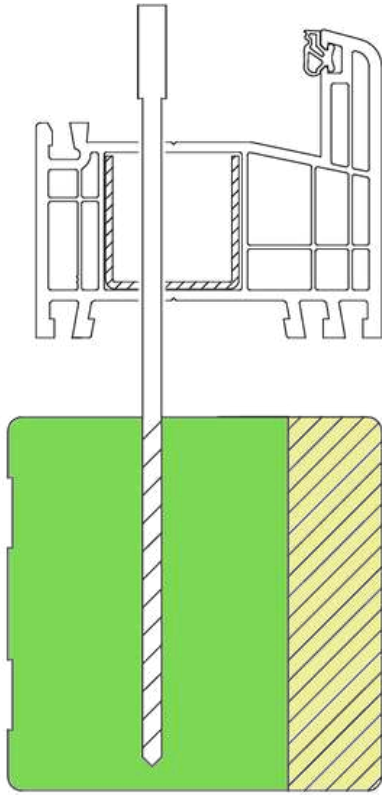
It is not necessary to seal the connection of the support and bottom profile.

10. Fastening the window frame to the profile system

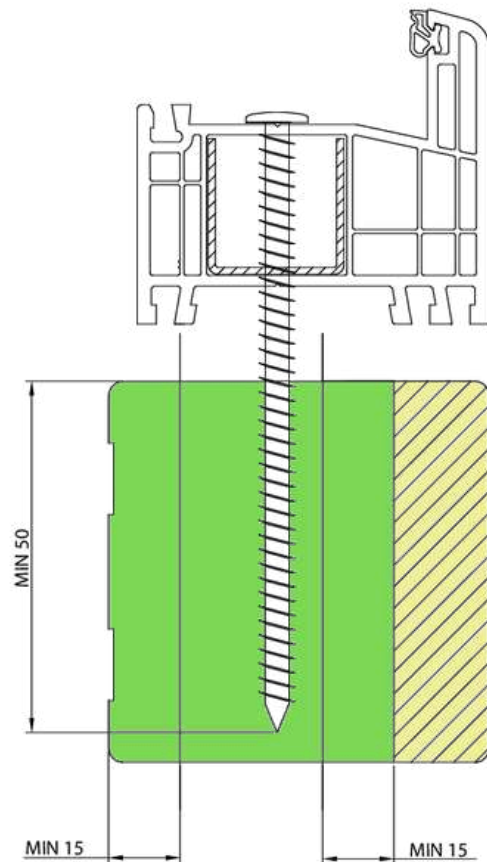
Fastening and sealing windows to Warmotech PRO and PRO+ system profiles is both quick and easy. Opting for Warmotech profiles guarantees window airtightness, effective sound insulation, and a stable, well-insulated window construction.



Before attaching the window frame to the PRO/PRO+ system profile structure, the profile must be pre-drilled using a 5 mm drill bit suitable for wood, metal or concrete (without hammer function) (fig. 10.1).

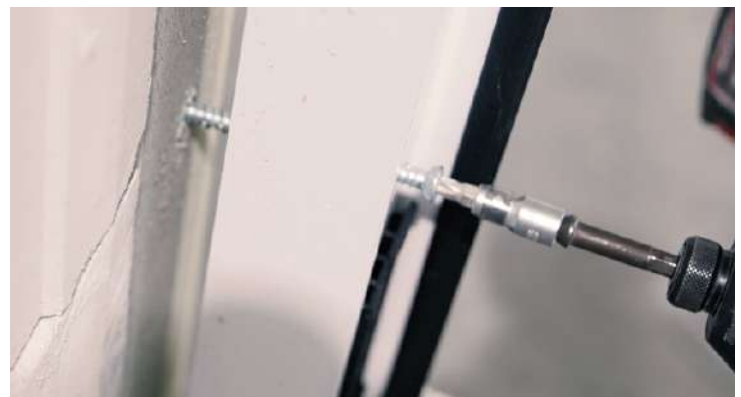


(fig. 10.1)

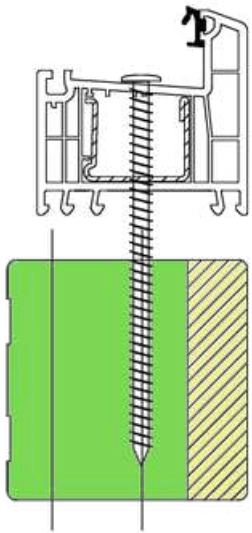


(fig. 10.2)

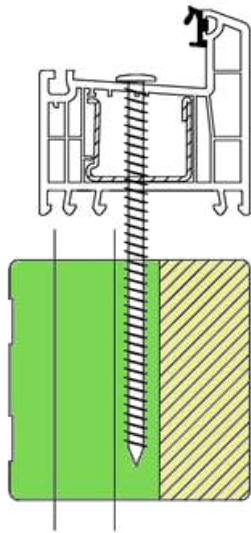
When fastening the window frame to the Warmotech PRO/PRO+ system profiles, ensure that screws are driven into the profile at least 50 mm. The center of each screw should be no closer than 15 mm from the edges of the Warmotech layer (indicated by the green color)(fig. 10.2).



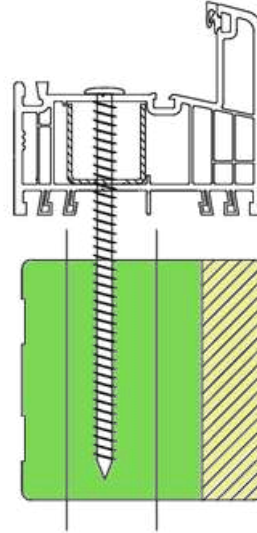
Examples of correct and incorrect methods for attaching the window frame to the profile are shown below.



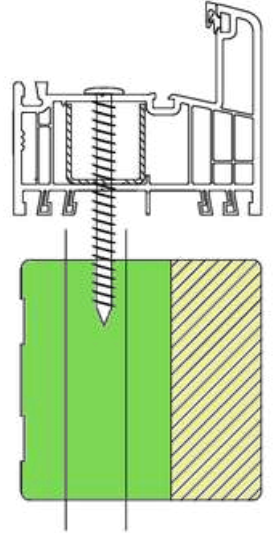
Correct screw depth,
 proper distance
 from the edge



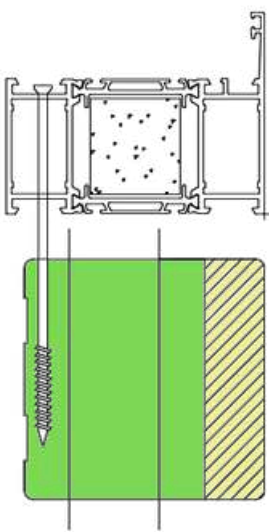
Correct screw depth,
 too close to the edge



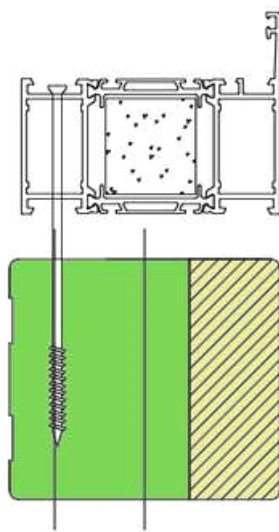
Correct screw depth,
 proper distance from
 the edge



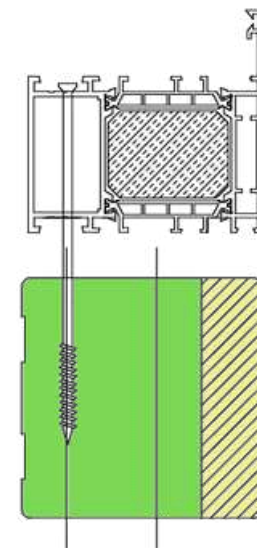
Incorrect screw depth,
 proper distance from
 the edge



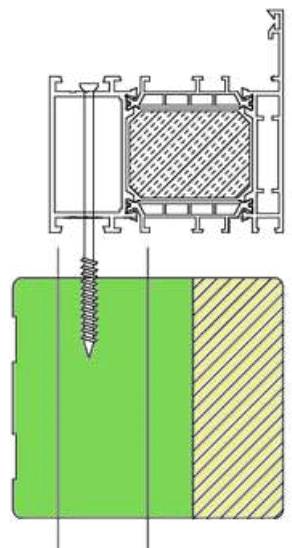
Correct screw depth,
 too close to the edge



Correct screw depth,
 proper distance from
 the edge



Correct screw depth,
 proper distance from
 the edge



Incorrect screw depth,
 proper distance from
 the edge



The placement and spacing of the screws, as well as the subsequent window sealing process should be completed following the recommendations provided by the window manufacturer.

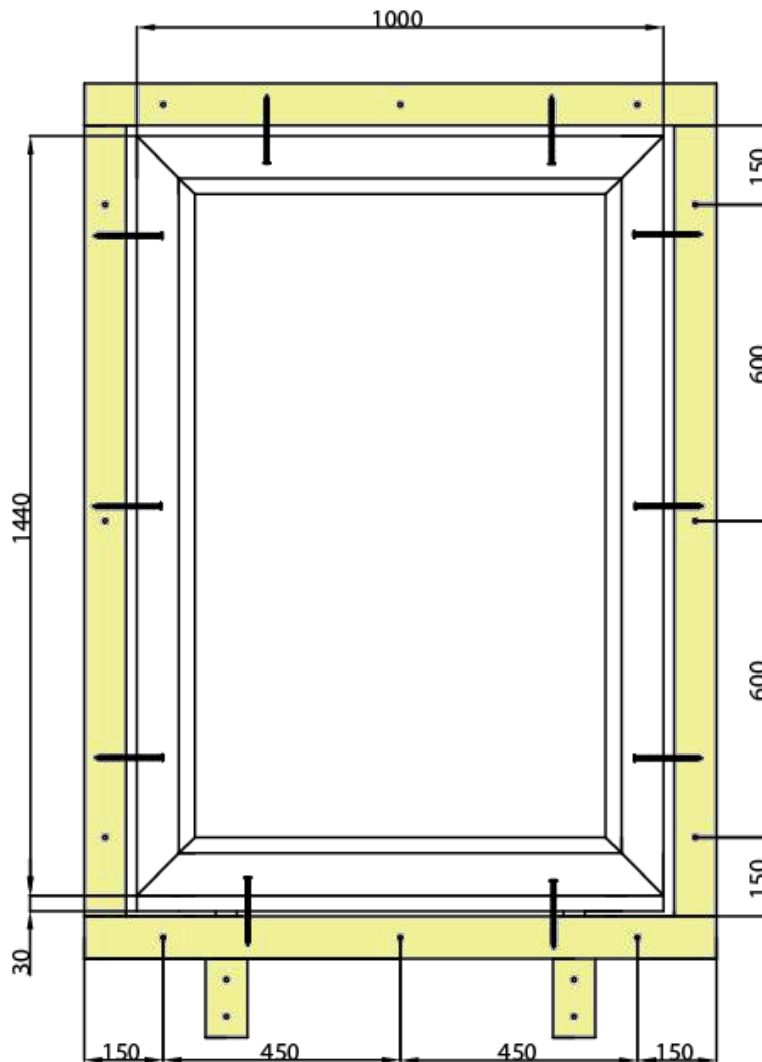
If you have further questions after reading this instruction, we recommend watching the installation video available on our website or Warmotech YouTube channel.

For more information please visit our website Warmotech.com.

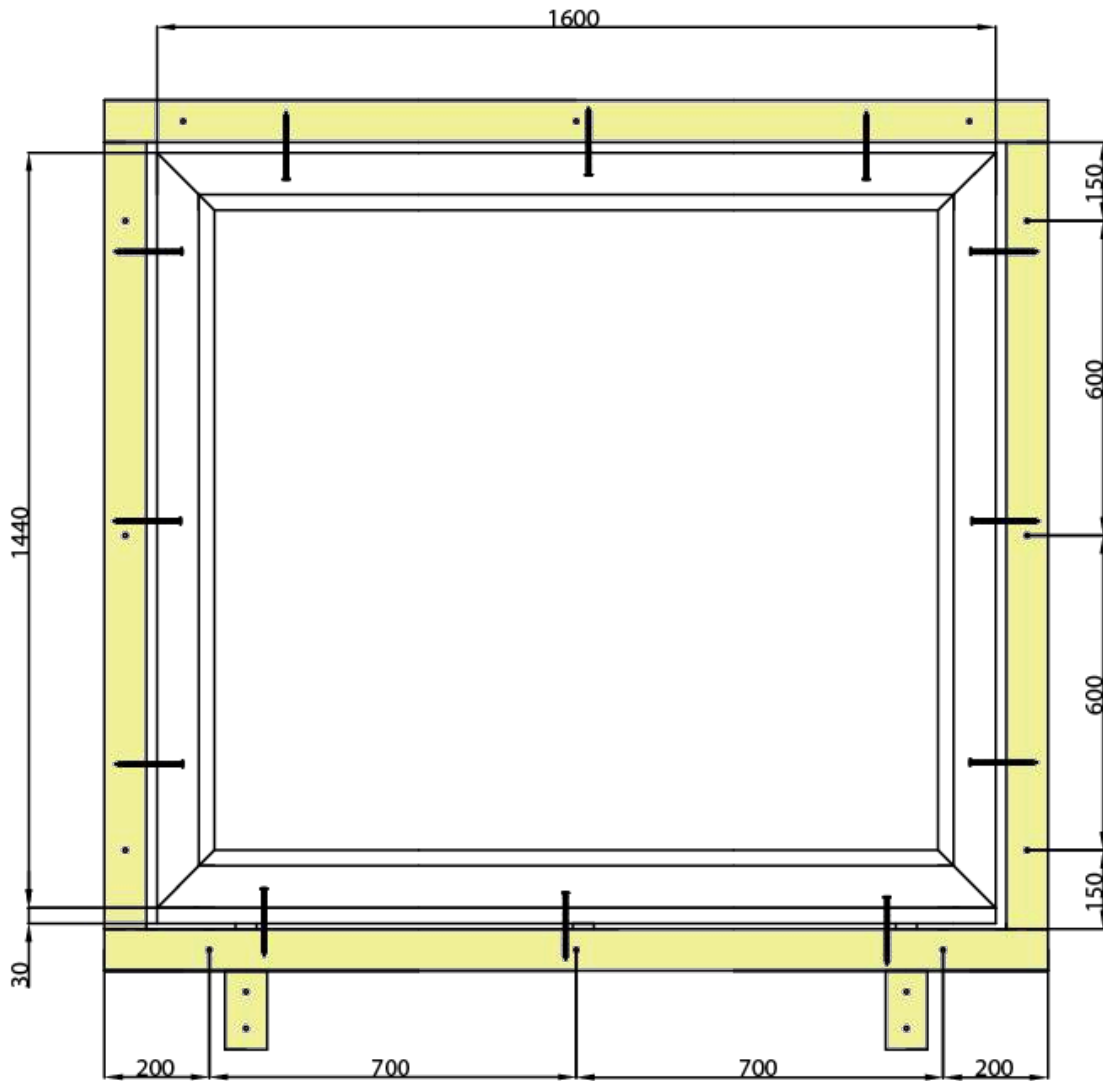


11. Examples of a properly installed PRO/PRO+ system

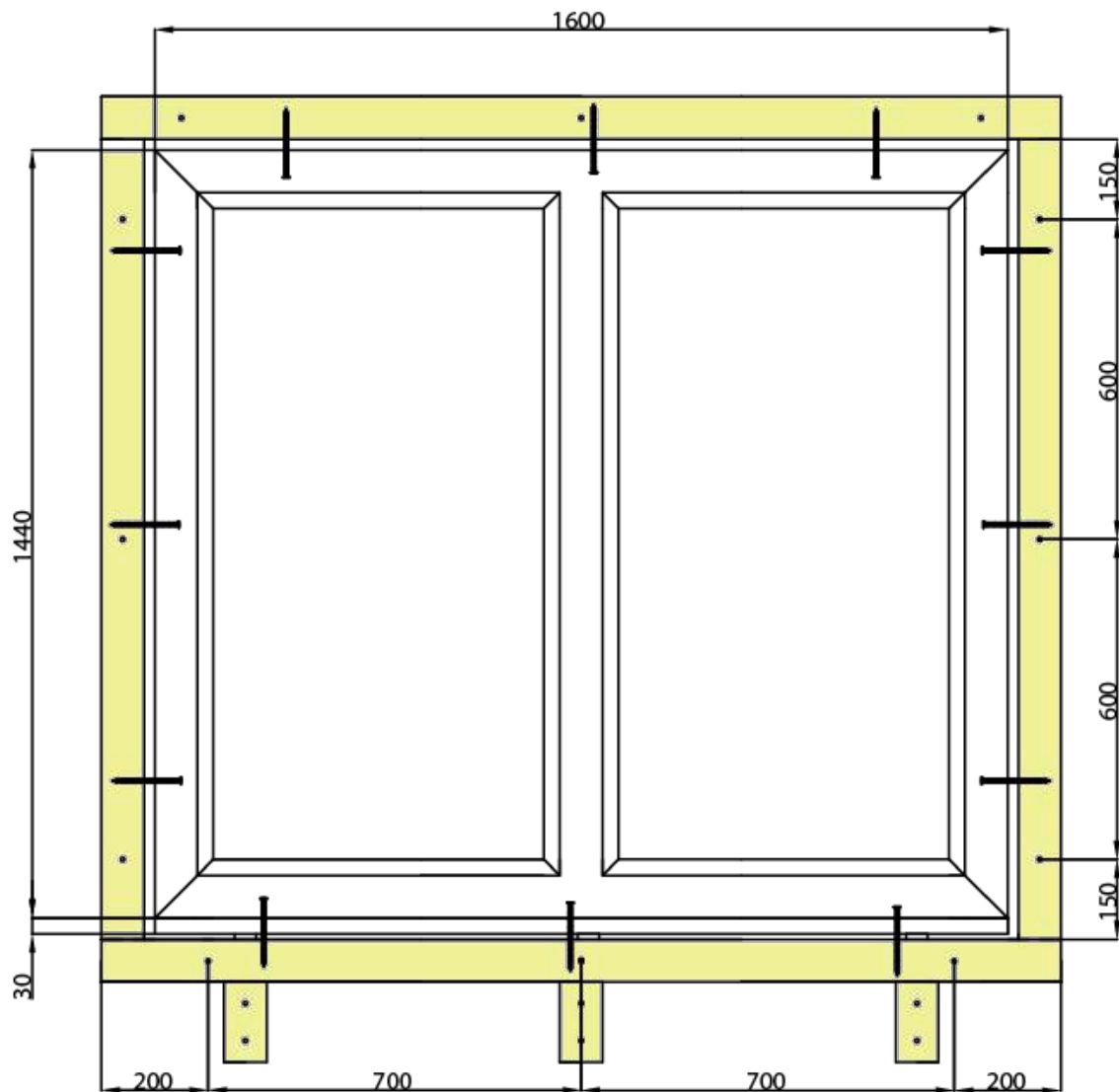
Principle installation diagram of 1000x1440 mm size window.



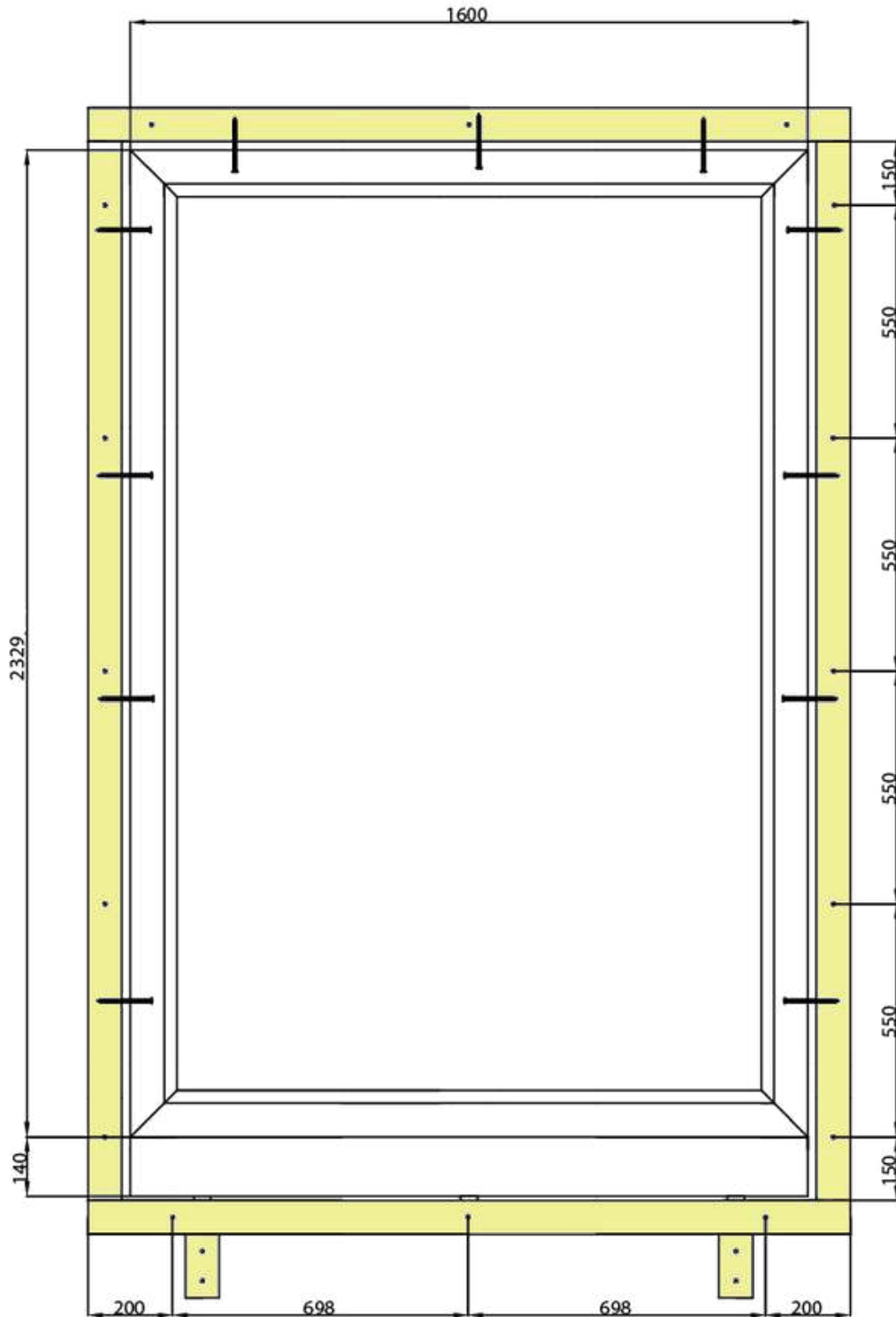
Principle installation diagram of 1600x1440 mm size window.



Principle installation diagram of 1600x1440 mm size window with one mullion.



Principle installation diagram of 1600x2329 mm size window.



Principle installation diagram of 2735x2329 mm size window with two mullions.

