

Installation Manual

THERMOROCK's tunneling system

Our **THERMOROCK** panels include a simple tunneling system with the purpose of easing electrical and plumbing installation.

- *They include two vertical channels each 41 cm / 16"*
- It also has horizontal channels each 41 cm / 16", standart height for electrical outlets and light switches.



Installation Manual

Tools required to install

This manual contains the correct way to install **THERMOROCK's** construction system in a basic housing project.



Cutting saw



Rotary hammer
(opcional)



Impact gun



Electric
Screwdriver



Measuring
tape



Line tracing
equipment



Level



Drywall saw



Putty knife

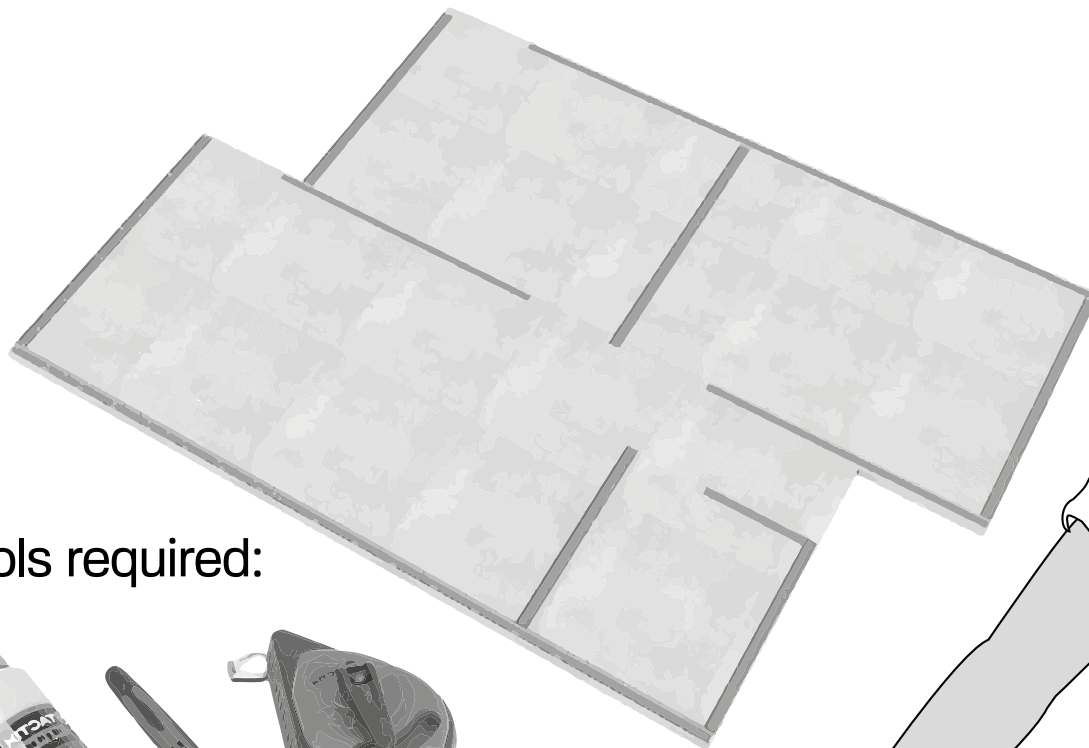


Rubber mallet

Installation Step 1

Tracing architectural layout for building's foundation

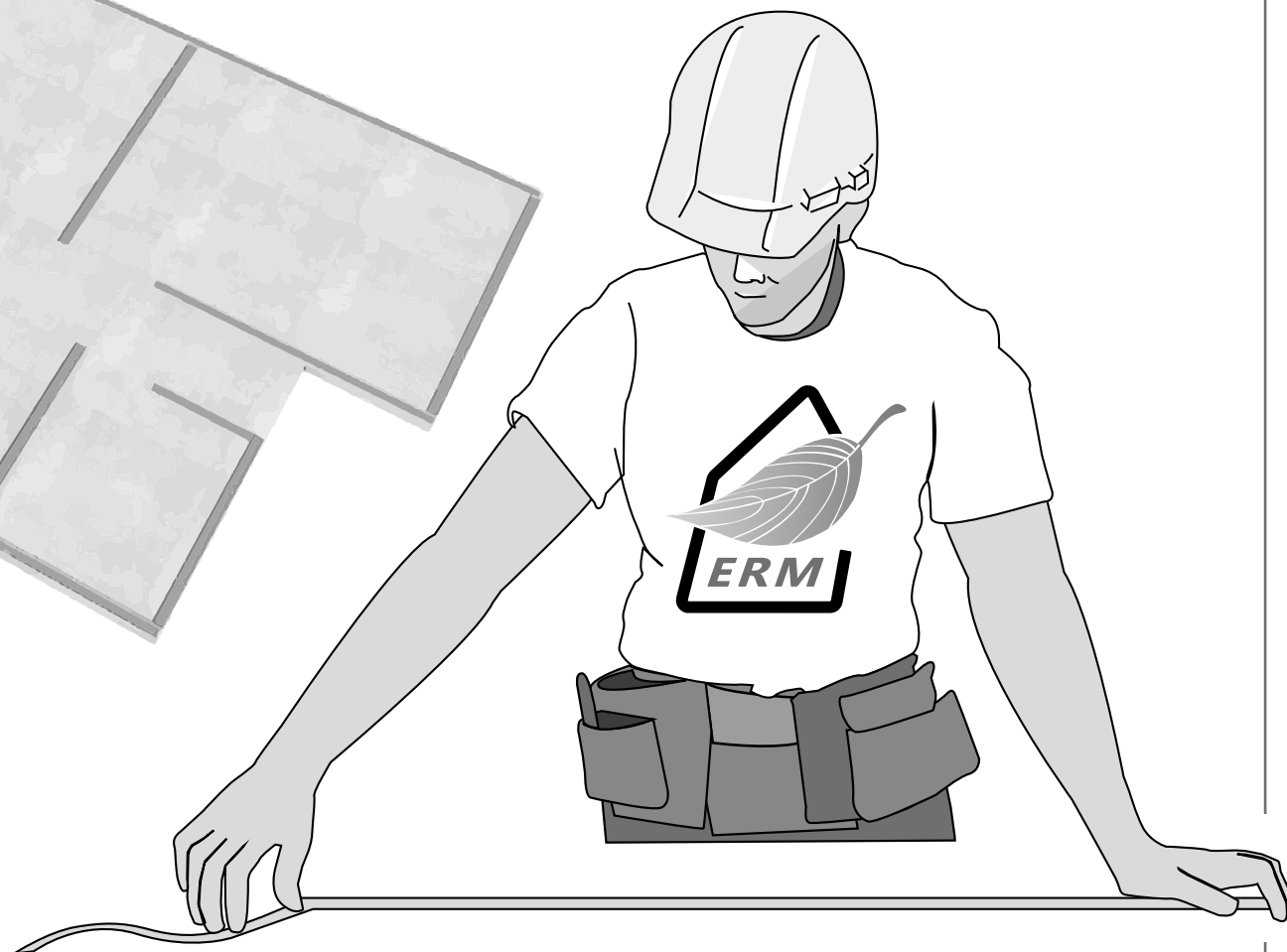
Once you have a leveled straight surface and the necessary preparations for hydrosanitary installations, begin to trace the architectural layout, to use as a guide while constructing the building's foundation.



Tools required:



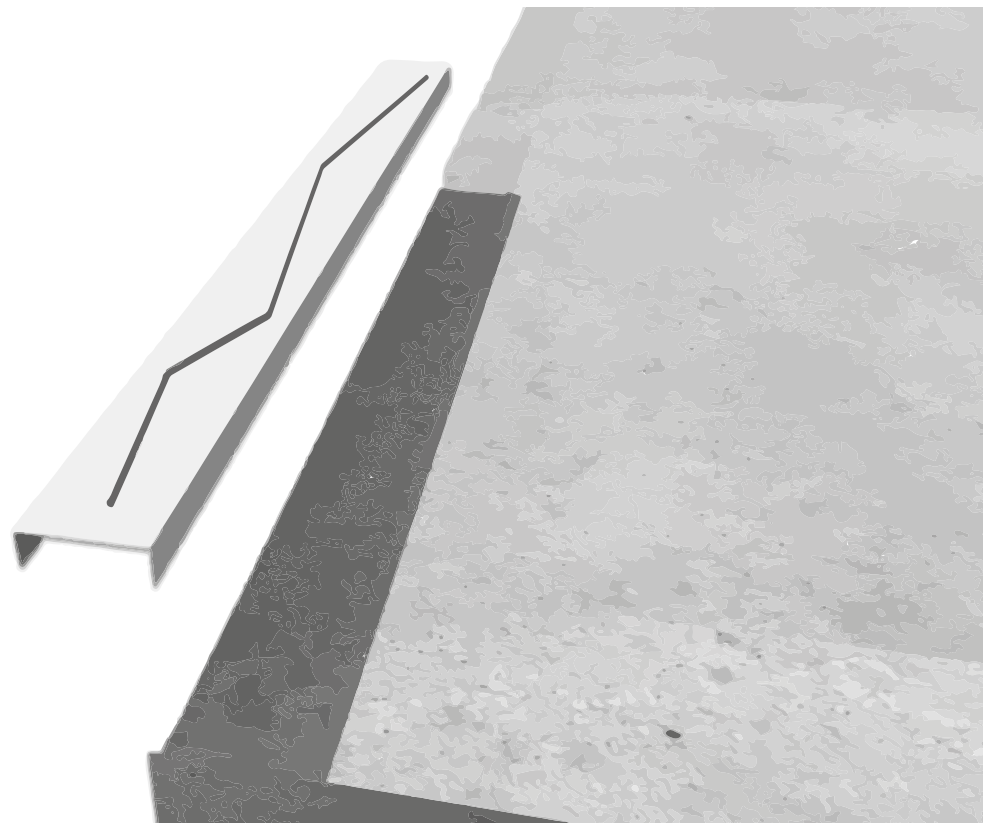
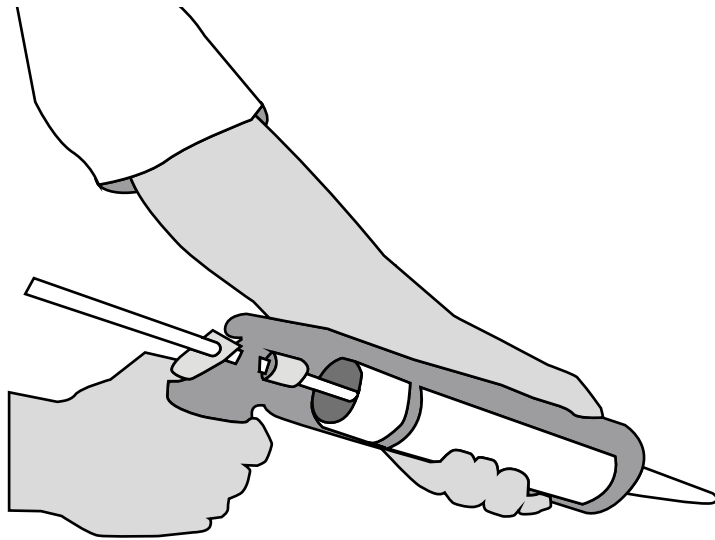
Line tracing equipment



Installation **Step 2**

Applying Urethane to anchor runner

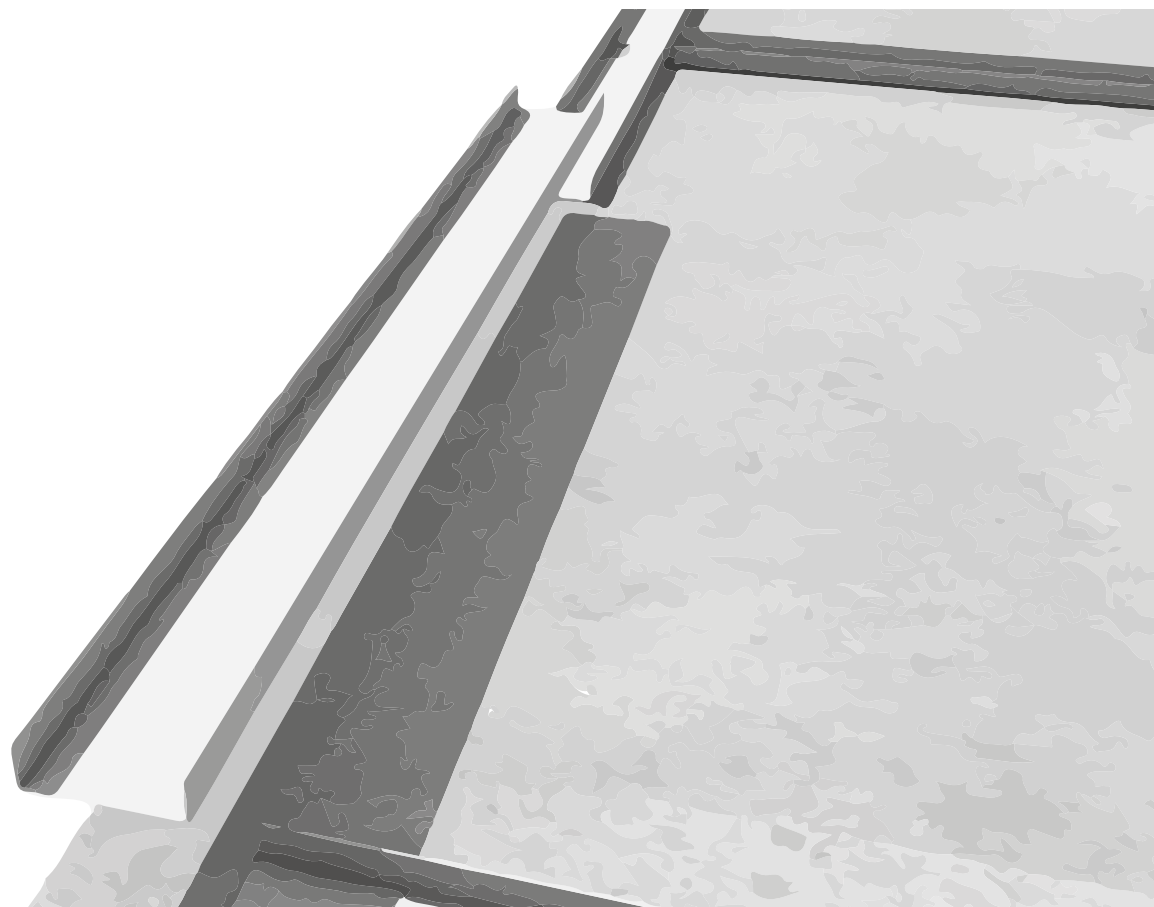
Must apply polyurethane to the inferior side (facing the ground), of the anchor conduit to secure and seal the bonding.



Installation **Step 3**

Installing anchor runner

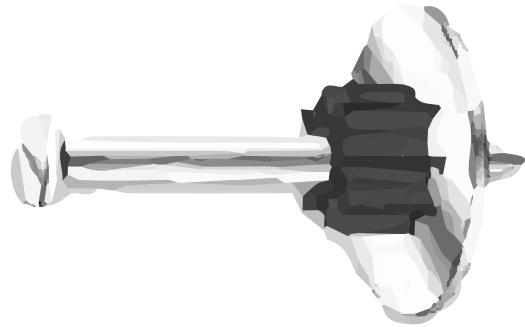
You will install the anchor runners through all of the edges of the perimeter using the architectural layout as a reference.



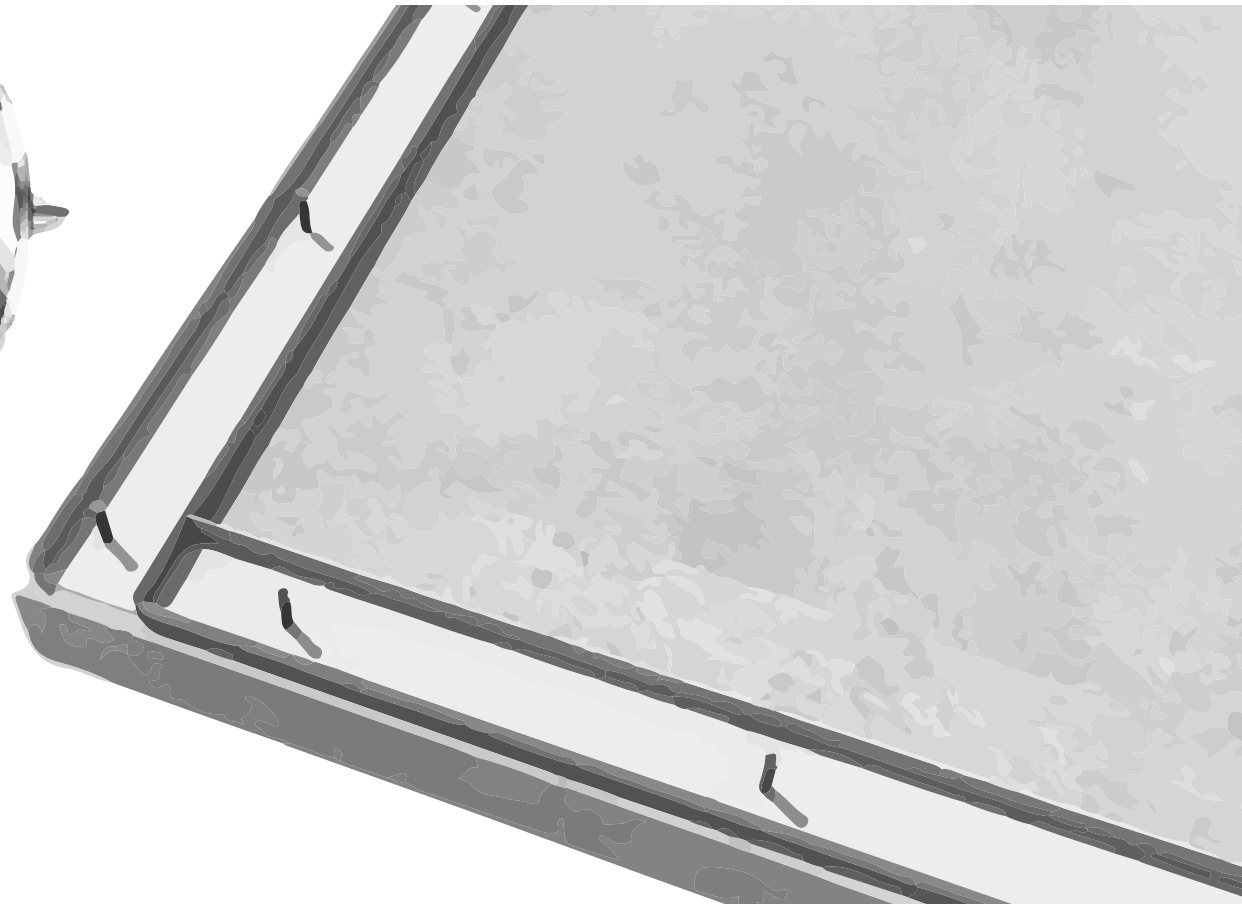
Installation Step 4

Binding anchor runner to concrete surface

To bind the anchor runner to the foundation's surface you will have to pin the anchor's surface with concrete nails each 1' (Feet) / 30 cm By using a hammer or an impact gun. This binding will happen through all the perimeter of the foundation.



Concrete nail

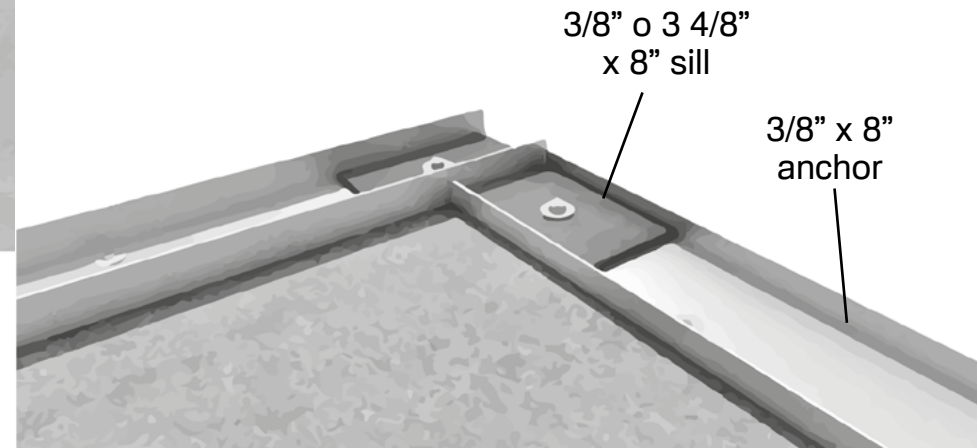
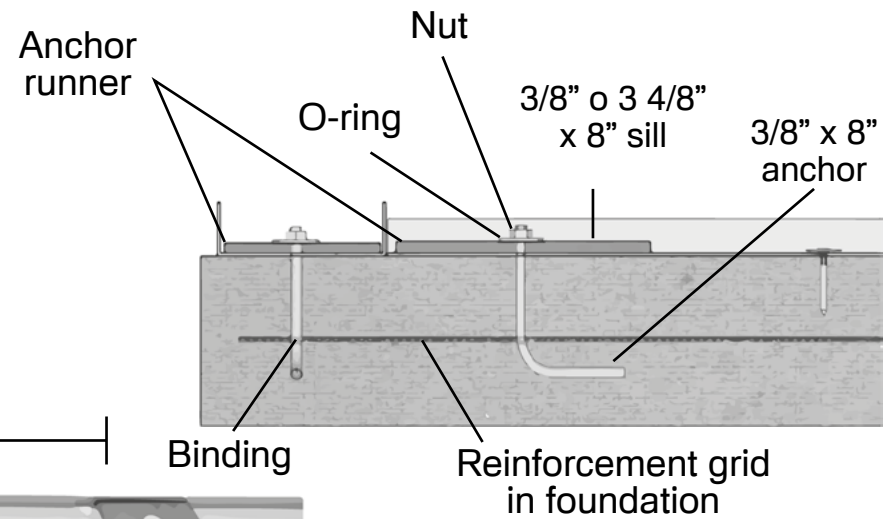


Installation Step 4

Special binding to foundation's surface

In the case of zones with high-speed winds, you need to use 3/8"x6" anchors with 3/8" or 3 4/8"x6" sills, that will be installed each 4' in the internal side of the anchor runner's surface

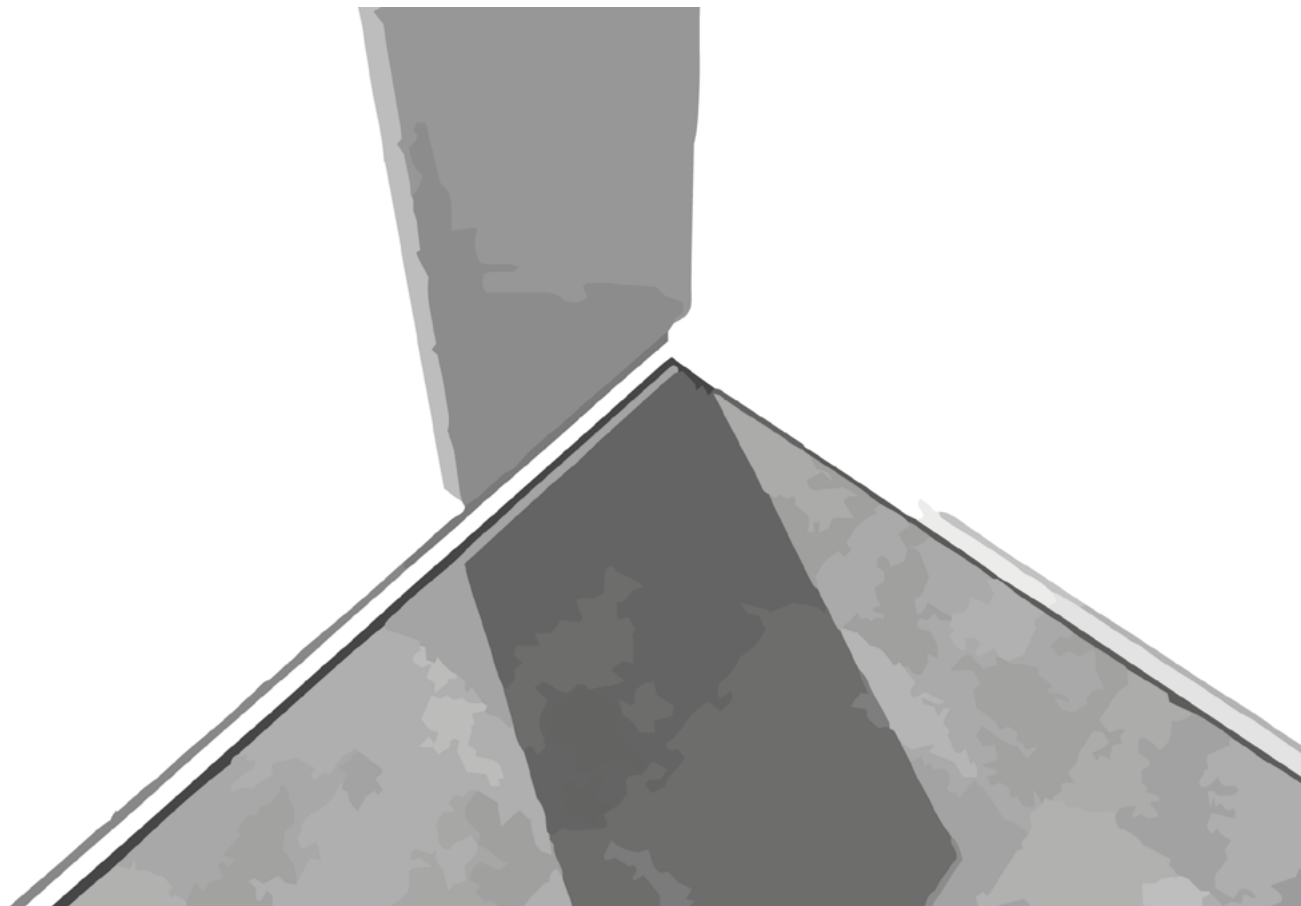
Anchor runner with sill



Installation **Step 5**

Installing the first **THERMOROCK** panel

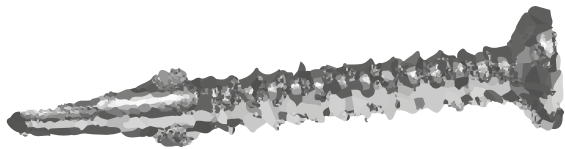
Begin the installation of the panels using the guidelines provided by the previous modulation of the building project by mounting the **THERMOROCK** panel into the anchor runner.



Installation Step 6

Fixing *THERMOROCK* panel

Once the panel is in place it will be fixed into the anchor runner by using 1 ¼" self-drilling screws each 8", be sure that the panel is correctly leveled while installing



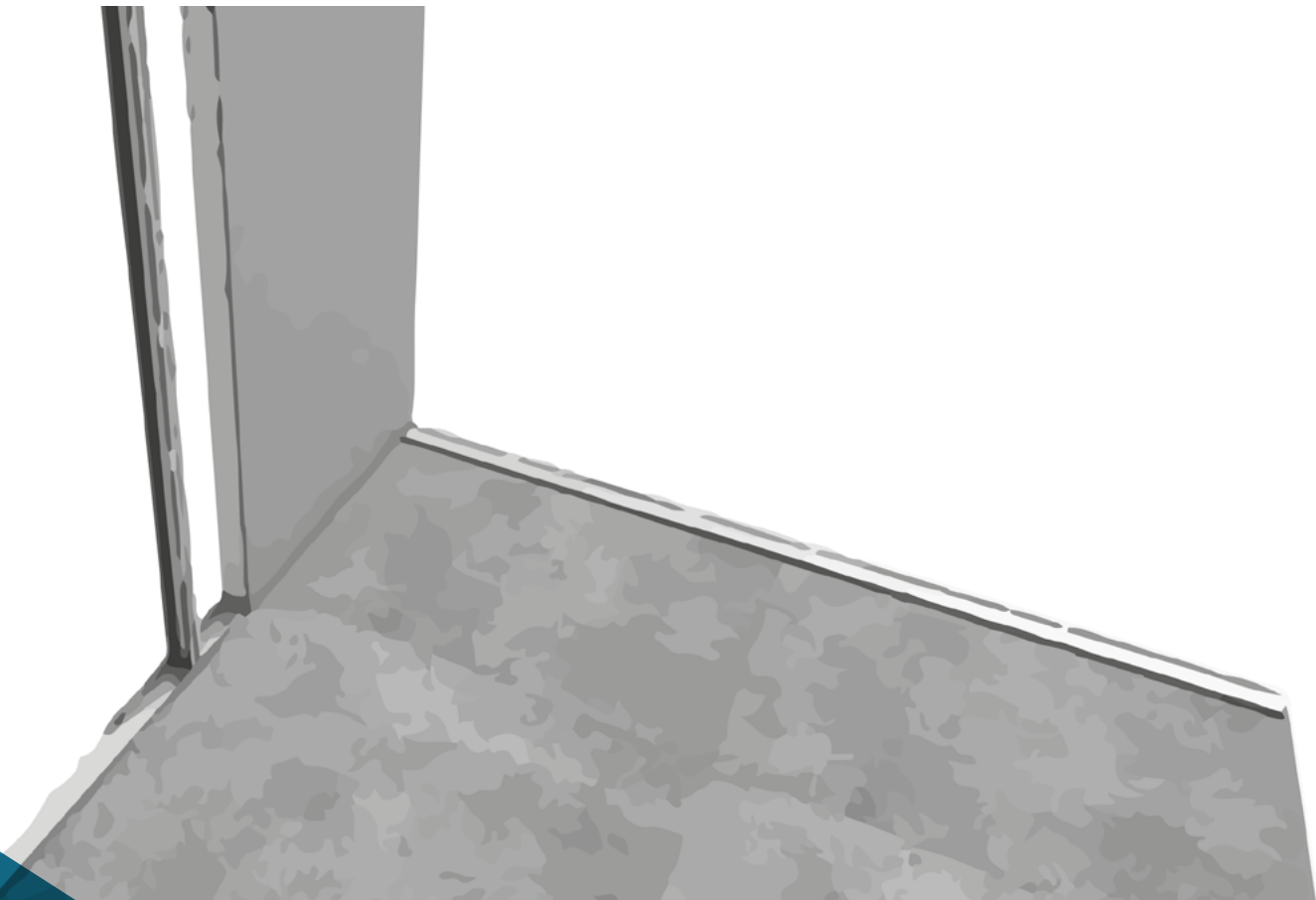
1 ¼" self-drilling screws that will be used through the perimeter of each panel.



Installation Step 7

Using *H* Connector with **THERMOROCK** panel

THERMOROCK's H Connector will be used as a consolidating system between lineally installed **THERMOROCK** panels, providing the system with a light-weight highly-resistant structure, by using 1 ¼" self-drilling screws each 8" through all of the perimeter

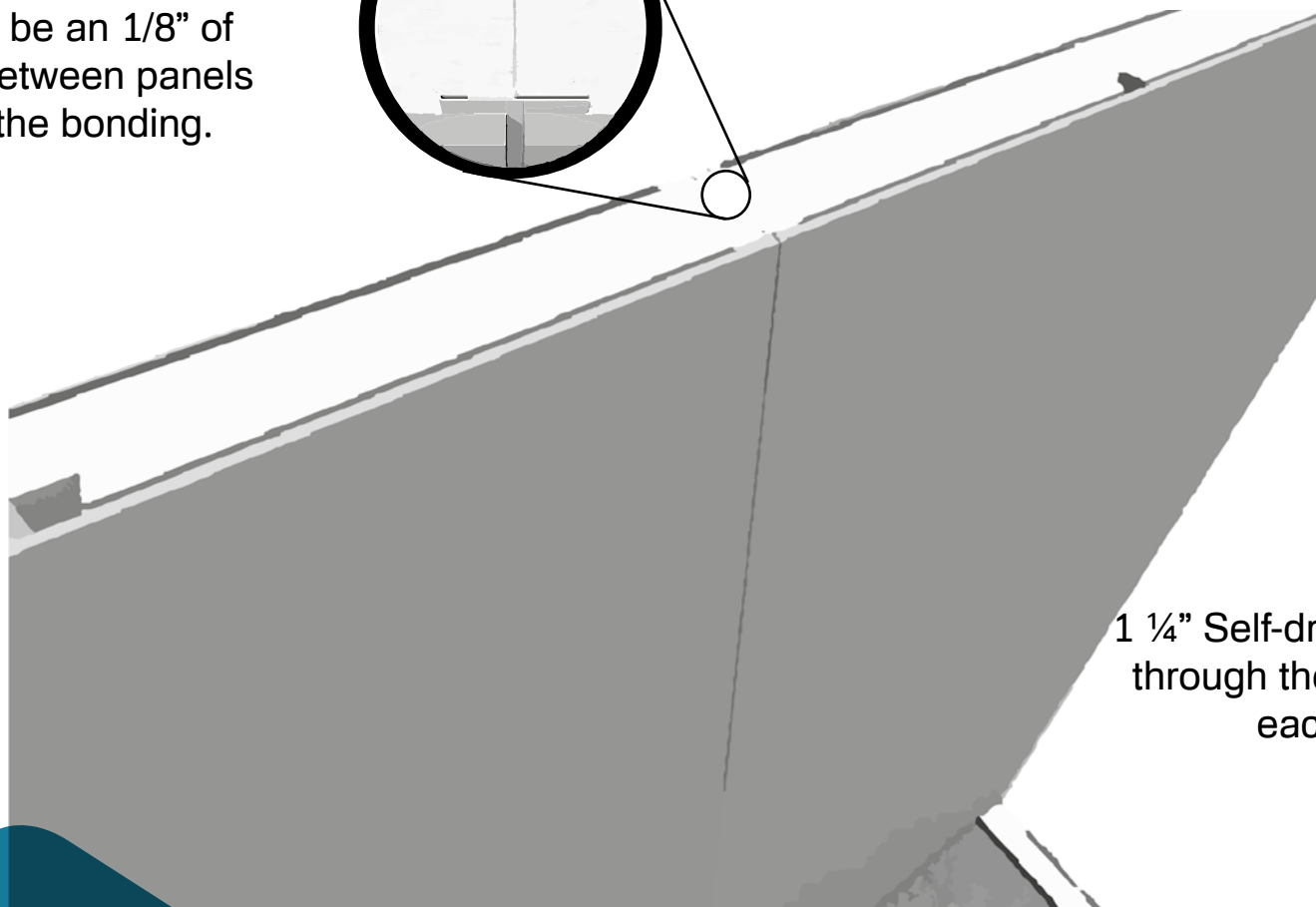
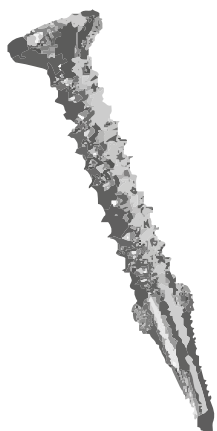
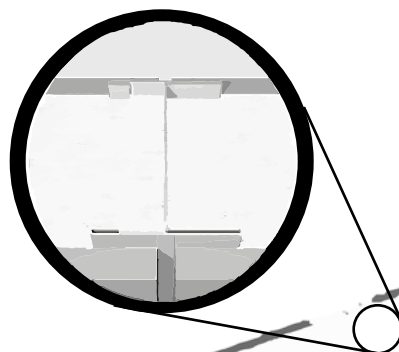


Installation Step 8

Usage of H Connector

An structure made of H Connectors gives additional rigidity and continuity to your walling.

There must be an 1/8" of free space between panels to assure the bonding.

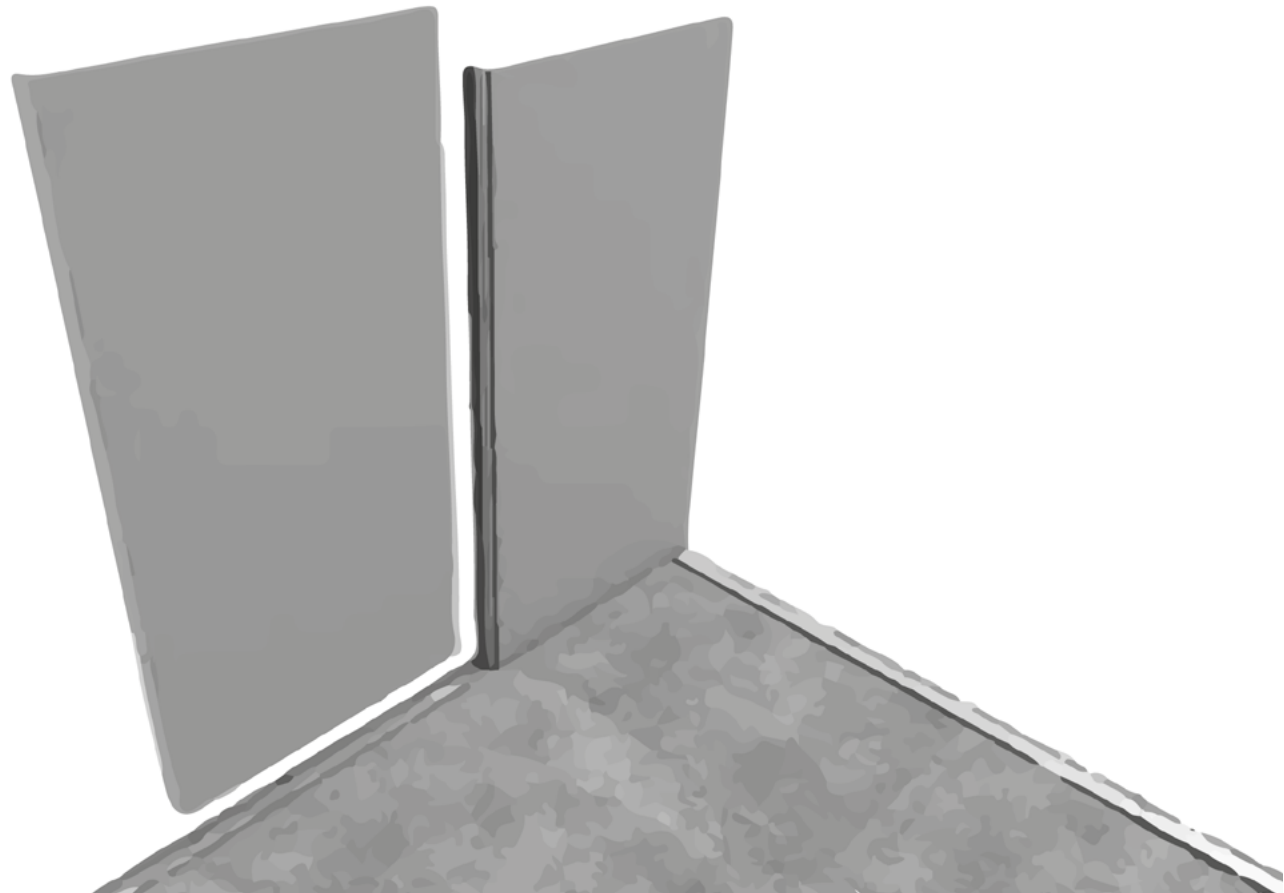


1 1/4" Self-drilling screws through the perimeter each 8"

Installation Step 9

Linear assembly of panels

Straight walls allow the linear assembly of panels, joint and fixed to each respective H Connector(s) and Anchor runner.



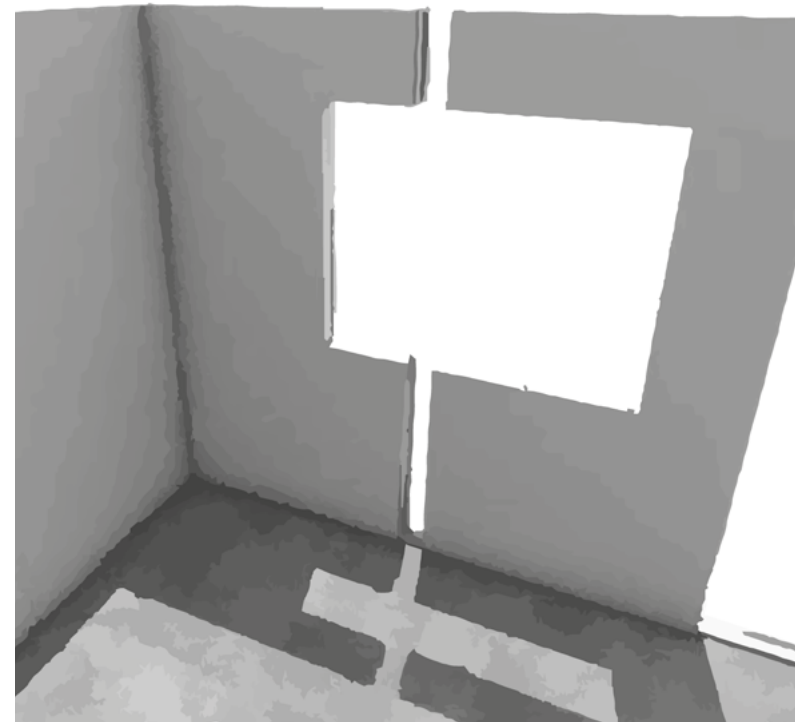
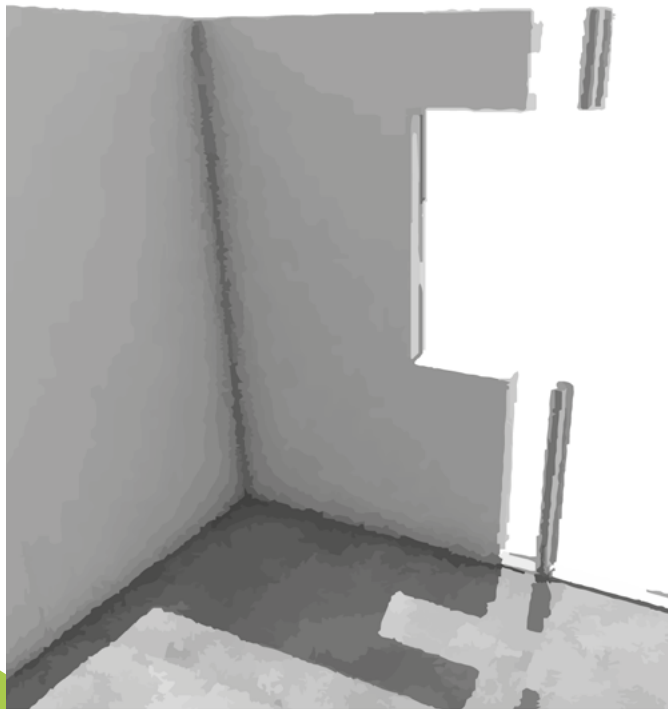
Installation Step 10

H Panel / H Connector Unión | Detail, cut and bond

Window and doorframes will be cut into the panels that contain such.
In the next example the H Connector will be segmented into two pieces
leaving the free space for the windowframe.

H Connector will be fixed into the
panel to maintain continuity.

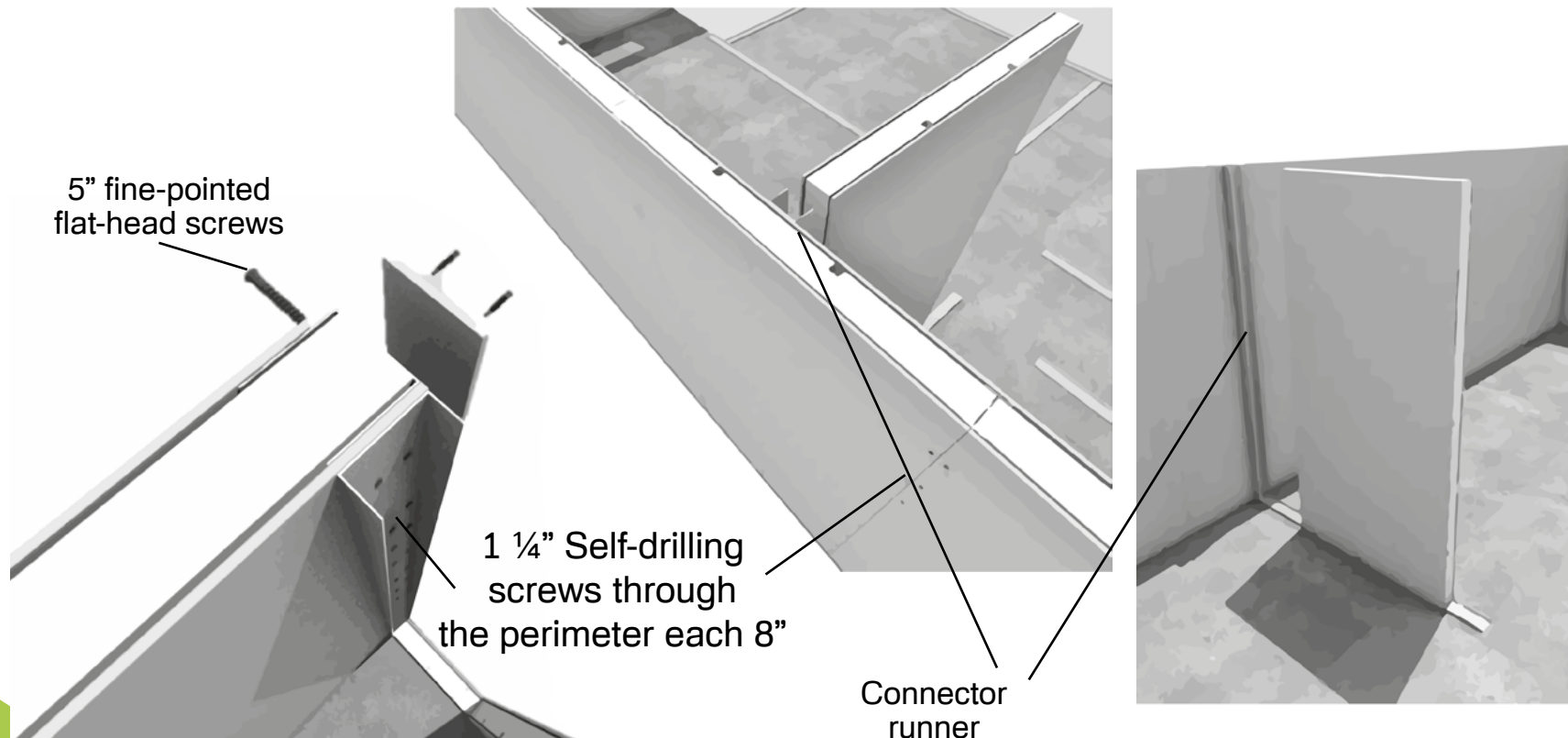
Doors and windows can be split
into multiple panels



Installation Step 11

Perpendicular union / Connector runner details

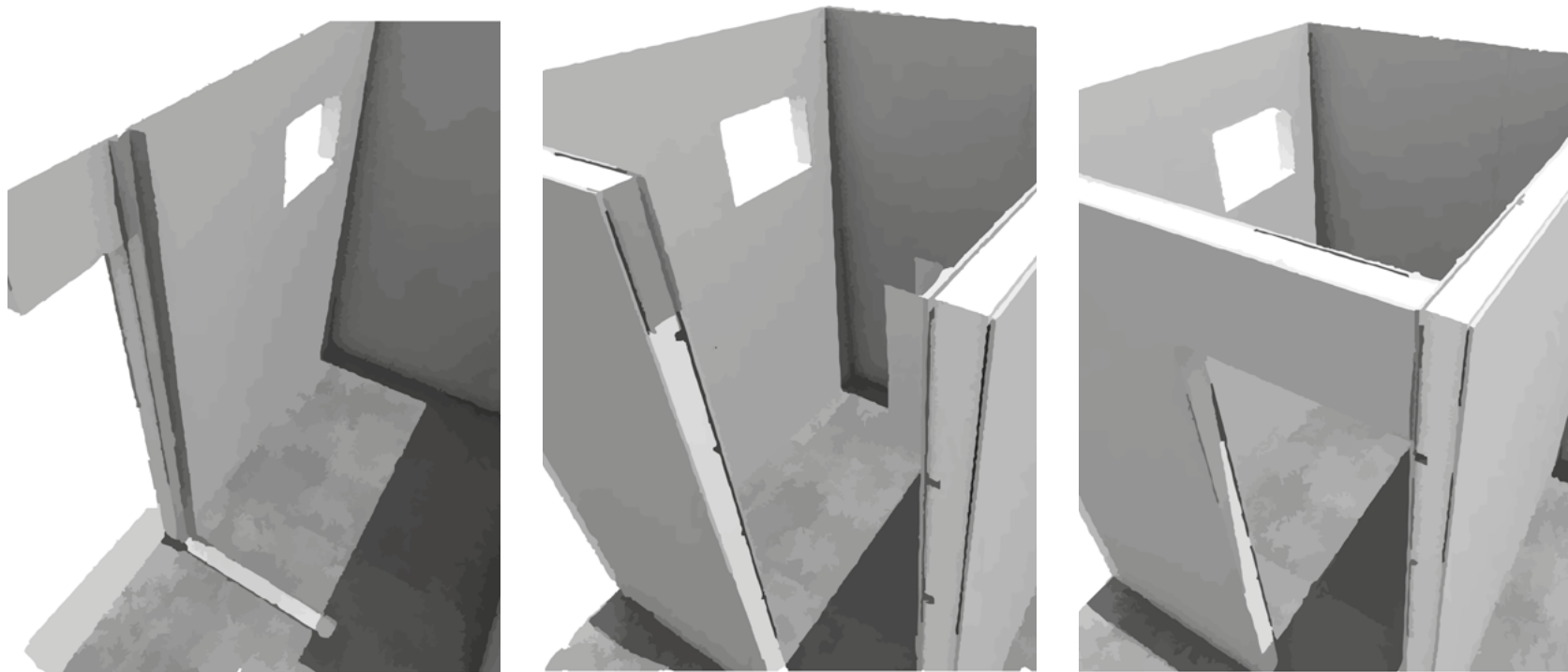
The installation of interior panels and perpendicular panels is made by using the Connector runner. The Connector runner has a higher cant efficiency compared to the Anchor runner, and will be used to connect panels perpendicularly by using 5" fine-pointed flat-head screws from the exterior each 1' aprox.



Installation Step 12

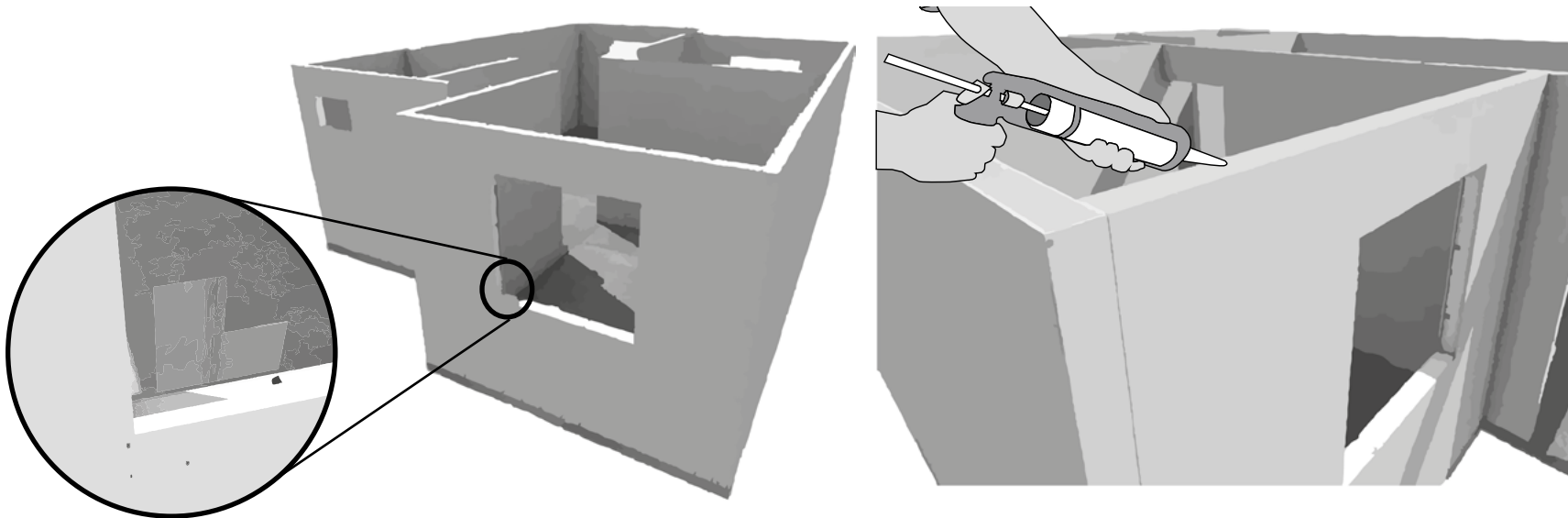
Connector runner for central wall and details

The Connector runner will be used vertically anywhere you need to connect a wall into a corner or perpenricularly, with a fine-point flat-head screw. For the piece of panel that goes above the door, you will need a matching piece of H Connector at the desired height and another piece of Connector runner at the same height. This piece of panel will be fixed into the H Connector and Connector runner in both ways by using 1 ¼" self-drilling screws.



Installation **Step 13** || Covering and sealing edges

Proceed to cover all of the perimeter's exposed edges, by covering them with anchor runners and/or edgebands, and applying polyurethane between the union of the top covering panel and the wall panels. This works as an adhesive and sealer, providing greater resistance to wind pressure.

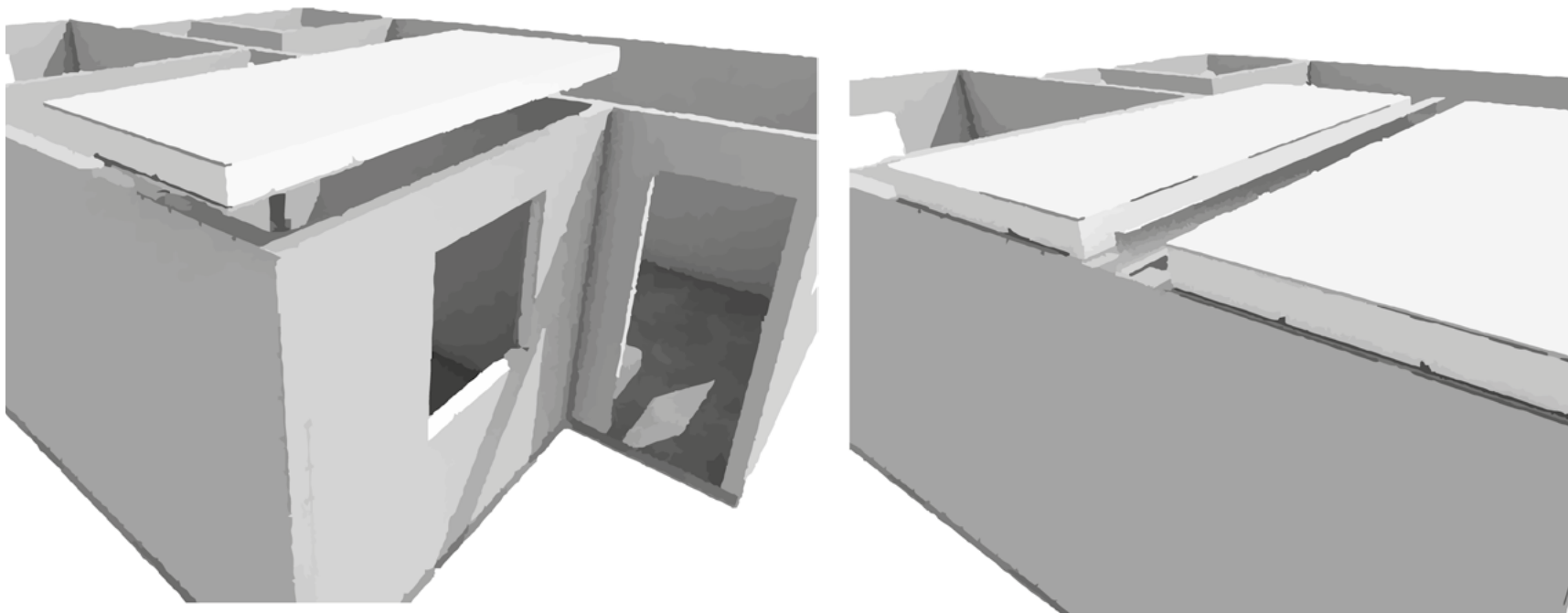


You must insert a 6"x 6" cal .20 galvanized sheet plate with a resaque de 3"x3" in every corner of any window frame, inbetween the polystyrene and the fibercement to avoid fissures any fissures in the panel's surface.

Installation **Step 14**

Installing top cover / H Connector

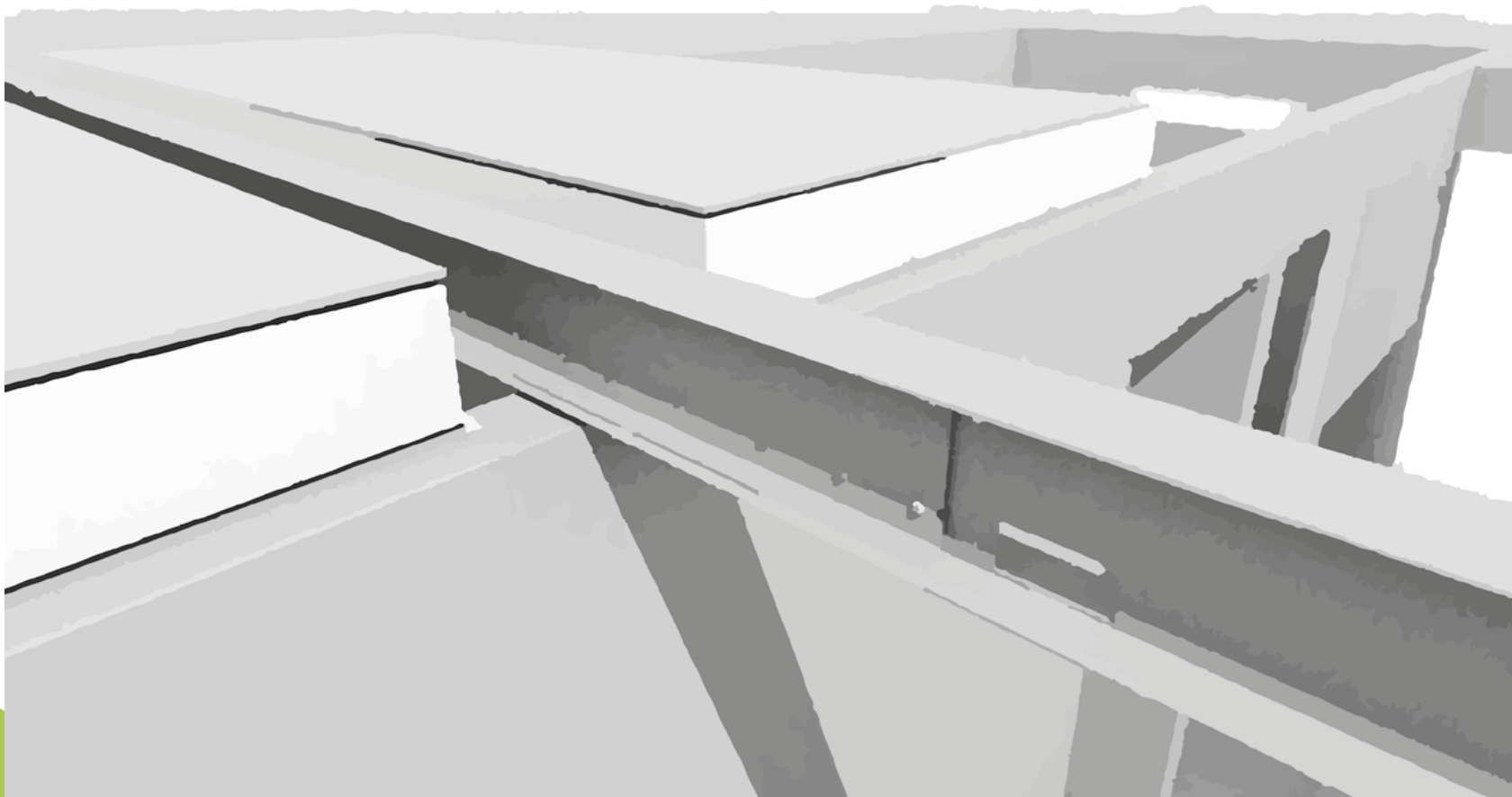
You must install top covering panels following the previous modulation guidelines of the building project. The panel's tunneled side must be facing downwards, fitting the wall's tunnel grid. Use H Connectors horizontally to give continuity to the top covering panels, repeat until you cover the whole top cover building area.



Installation **Step 15**

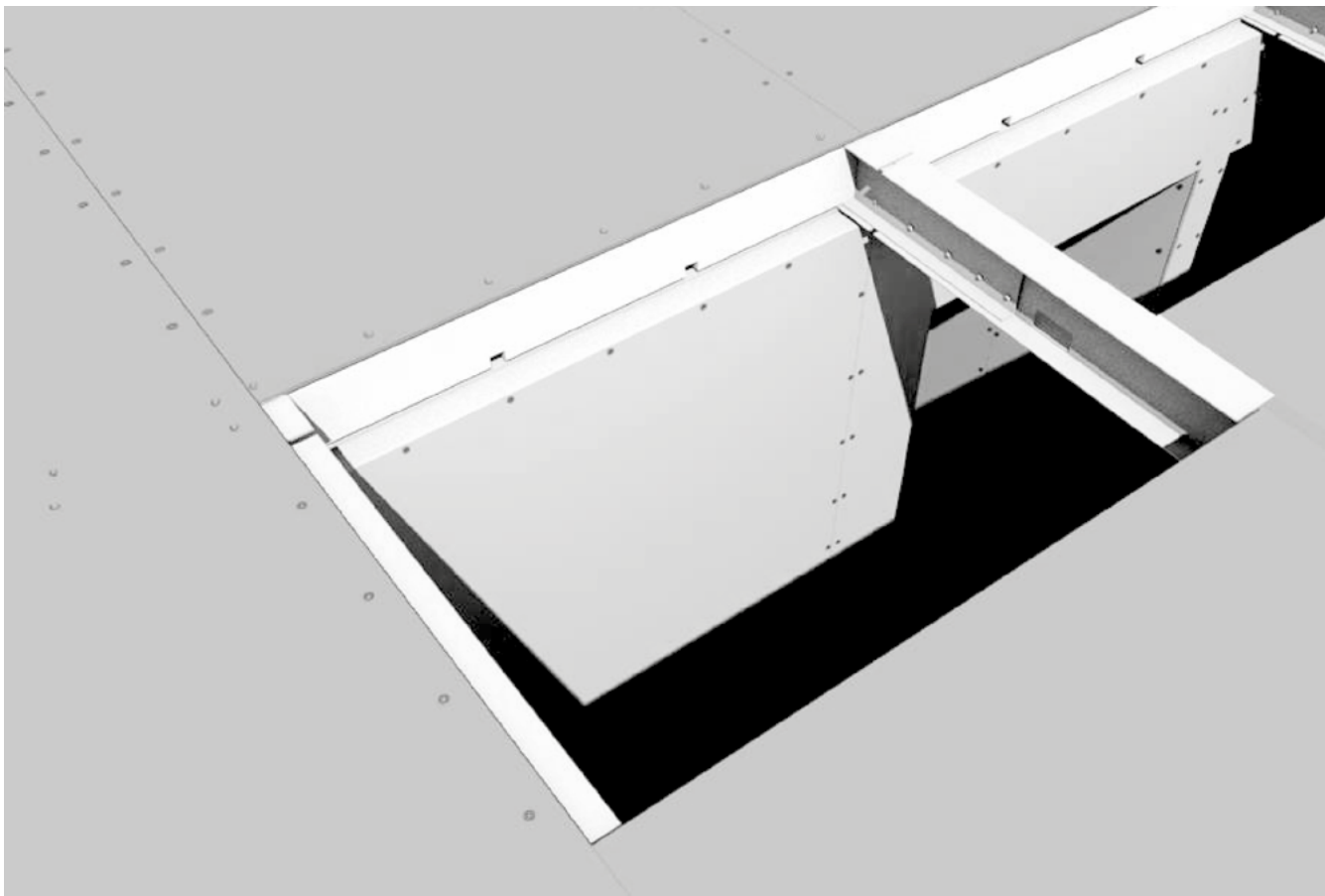
Extending H Connector / Interior Anchor runner

The Interior Anchor runner is utilized to join two H Connectors, extending the length of both of the connecting sides by 1' (30cm).



Installation **Step 16** || Transversal installation of H Connector

You must slide the panel of the neighboring section until you seal the cover. In case of double fall down roofs, you must substitute the H Connectors for the corresponding stand laminate with the required tilt for adequate installation.

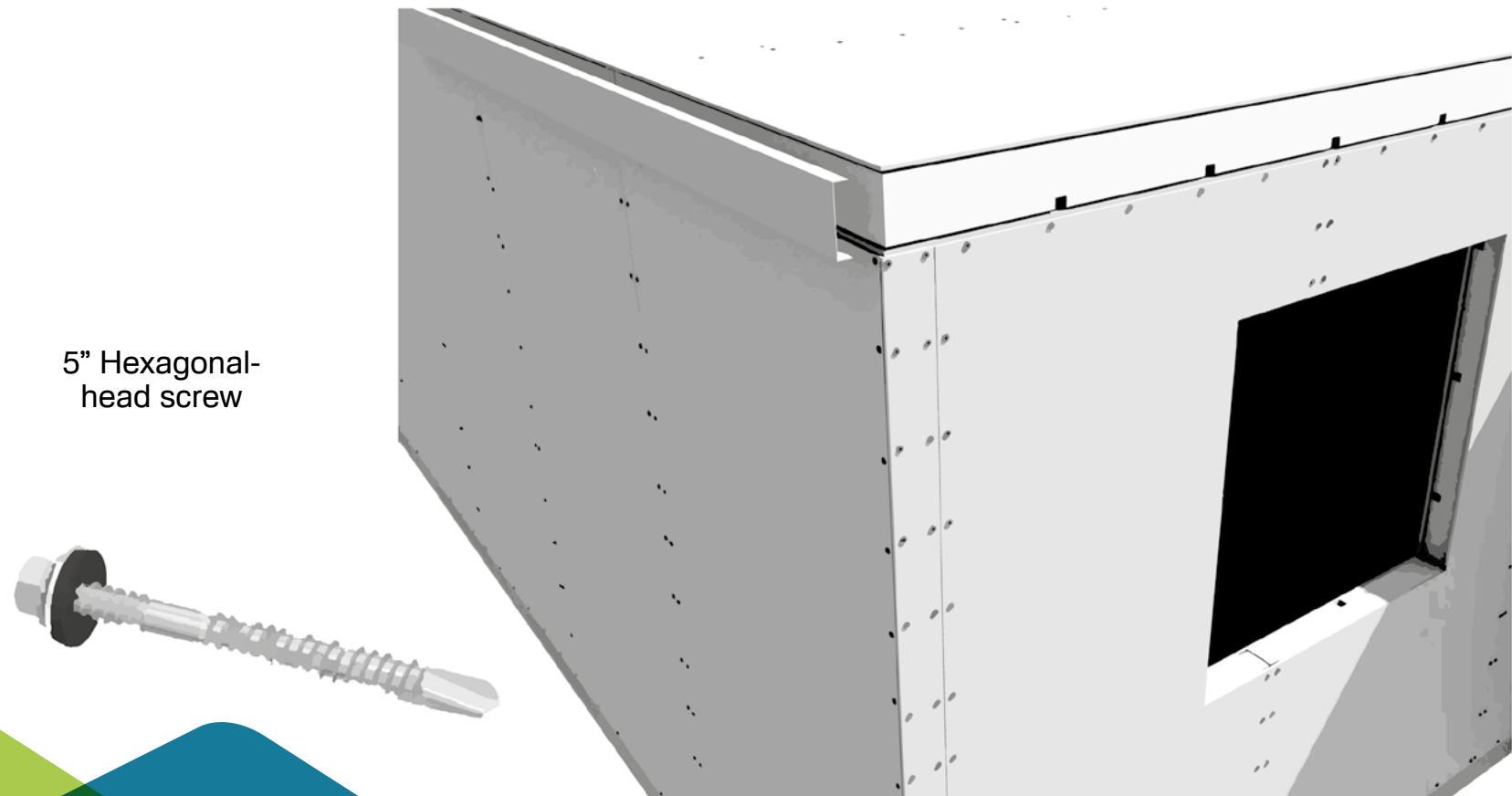


Installation Step 17

Covering and anchoring exposed edges

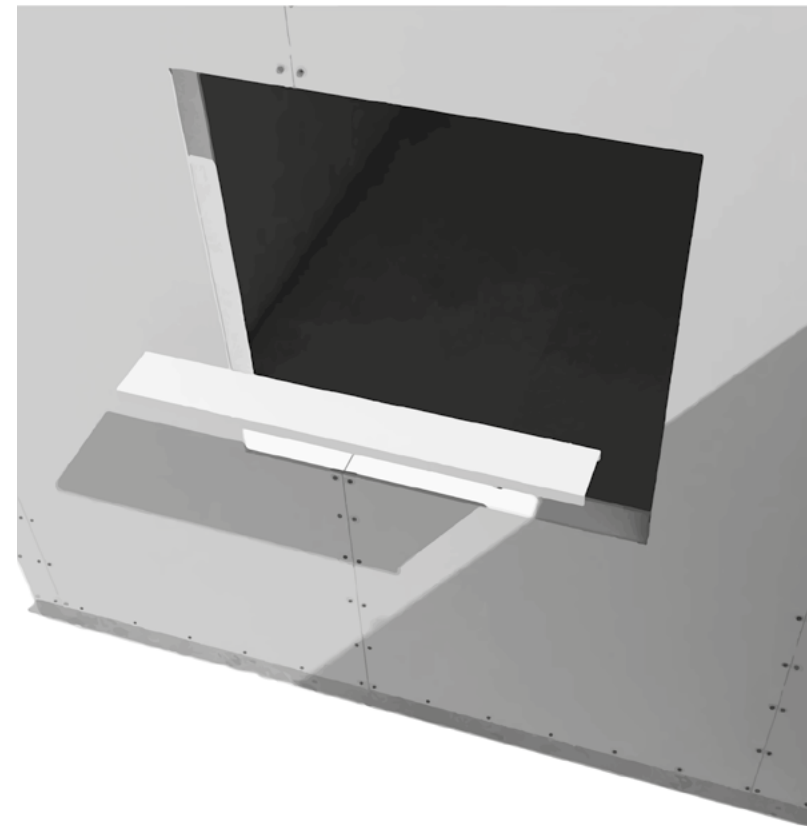
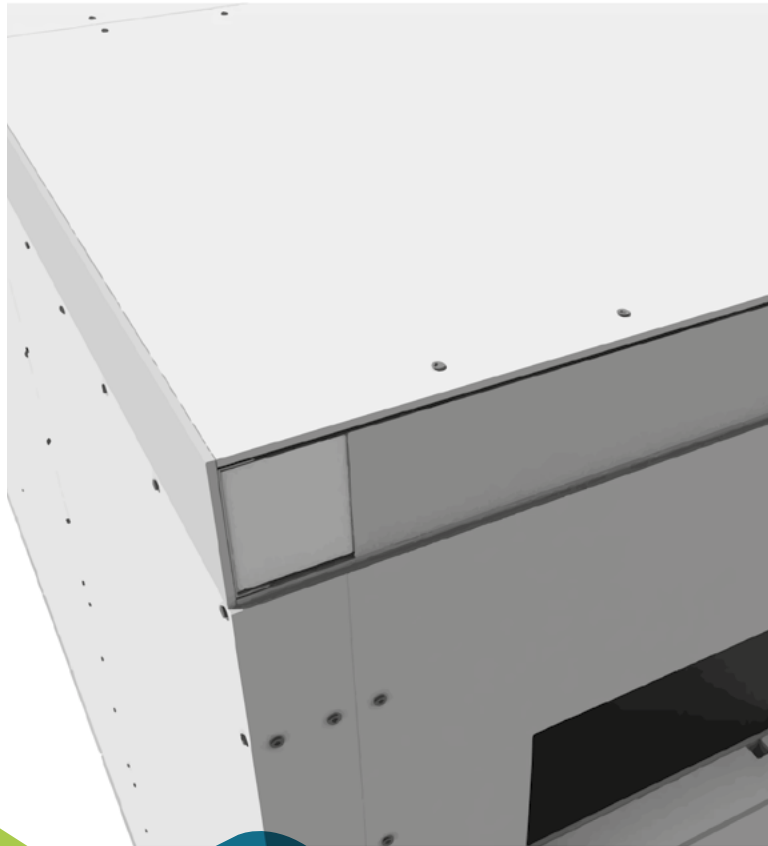
Exposed edges will be covered with the required Anchor runners, afterwards they will be covered by each respective edge-cover(s).

Top covering panels must be anchored from the superior side of the panel by 5" hexagonal-head screws with a distance of 1' (30cm) between each of them, binding the covering panel to the wall panel.



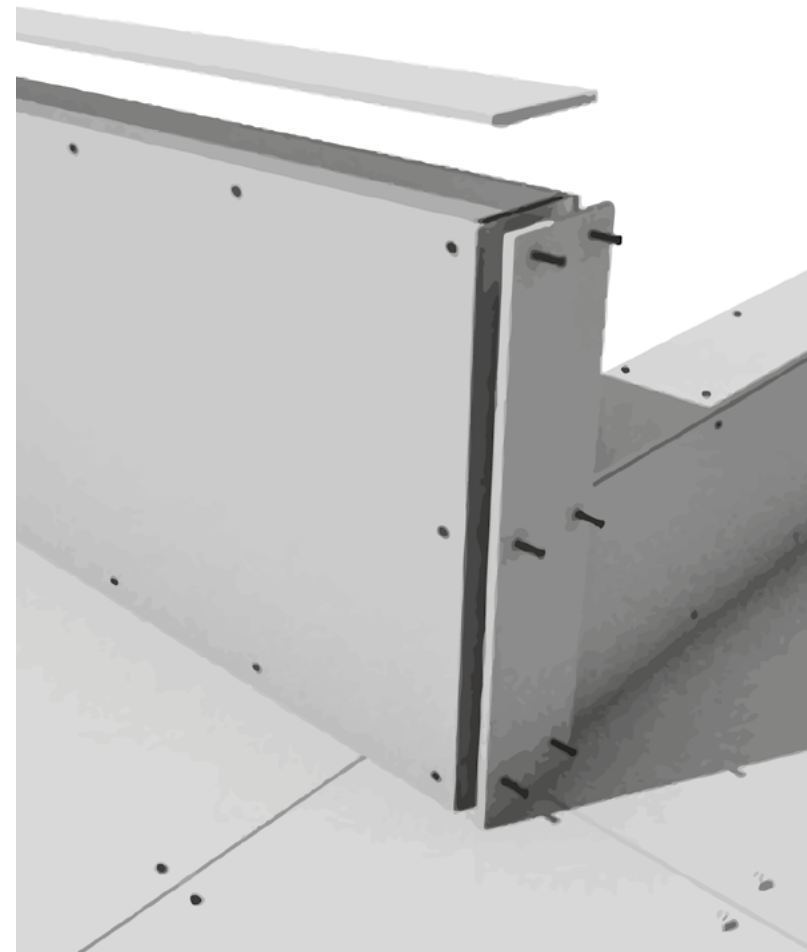
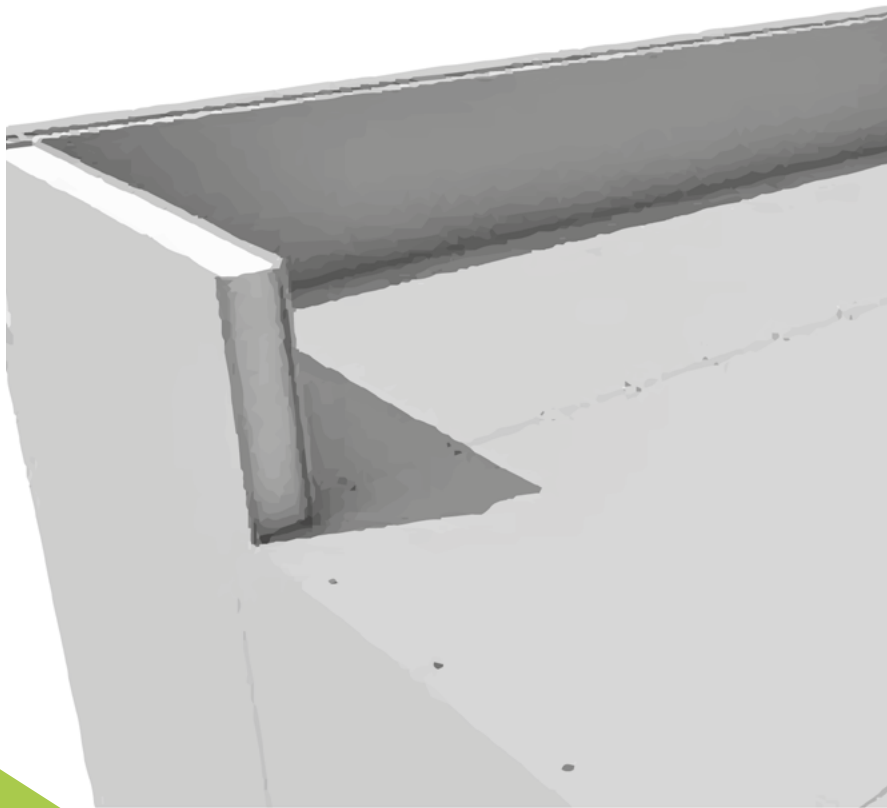
Installation **Step 18** || Fibercement detailing in covers and edges

Fibercement covers can be cut and installed on top of the Anchor runners to provide a smooth surface for the finishing covers of the building's edges through all the perimeter.



Installation **Step 19** || Placing parapet

You can install segmented panels on top of the roofing cover to serve as parapet using the architectural guidelines. You must install the required Anchor runners and fibercement edge-covers to seal any exposed edges.



Installation **Step 20** || Your housing project is ready

Following these easy steps, your housing project is ready to receive doors, windows, impermeabilization and paint finishing covers.

Let's build the future together, with **THERMOROCK**. Helping people and the environment.

