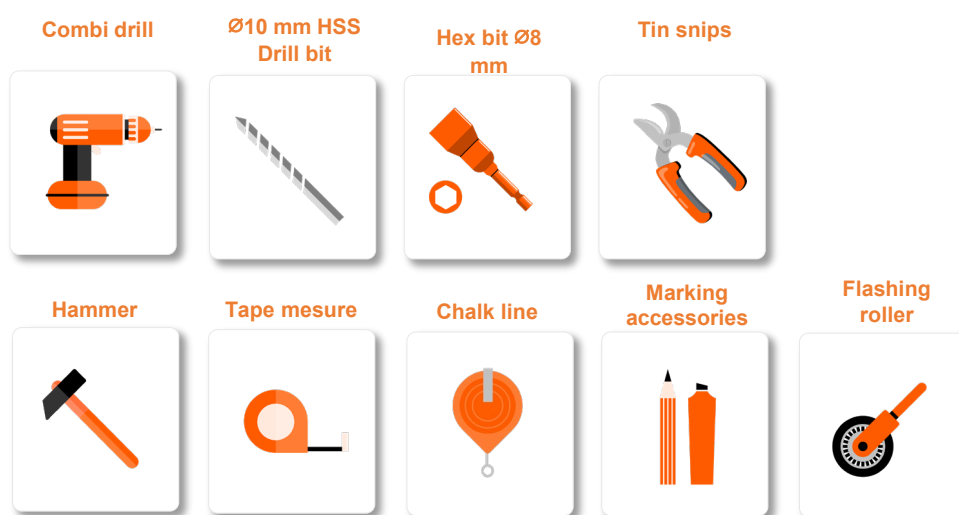


REQUIREMENTS FOR A SUCCESSFUL PROJECT

Before starting the installation of the GSE IN-ROOF LANDSCAPE EVOLUTION SYSTEM, check that you have carried out the following actions :

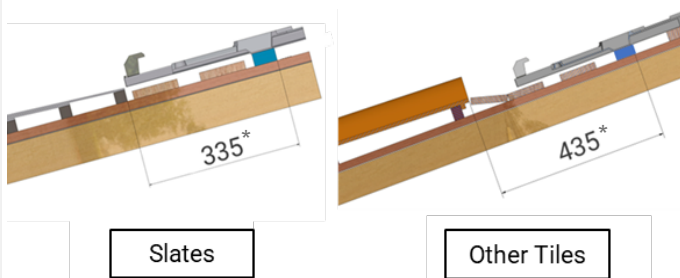
- ☐ Follow online courses as well as in-person training
- ☐ Use the **CONNECTOR** tool to design your instal
- ☐ Identify the roof covering installed with the system
- ☐ Prepare the tools you need to install the system :



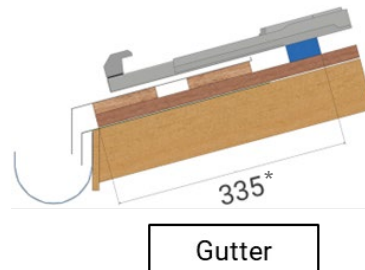
Step 1 : Installation of the support battens

1 Install the **reference batten** (in blue):

For installation in the **middle** of the roof:



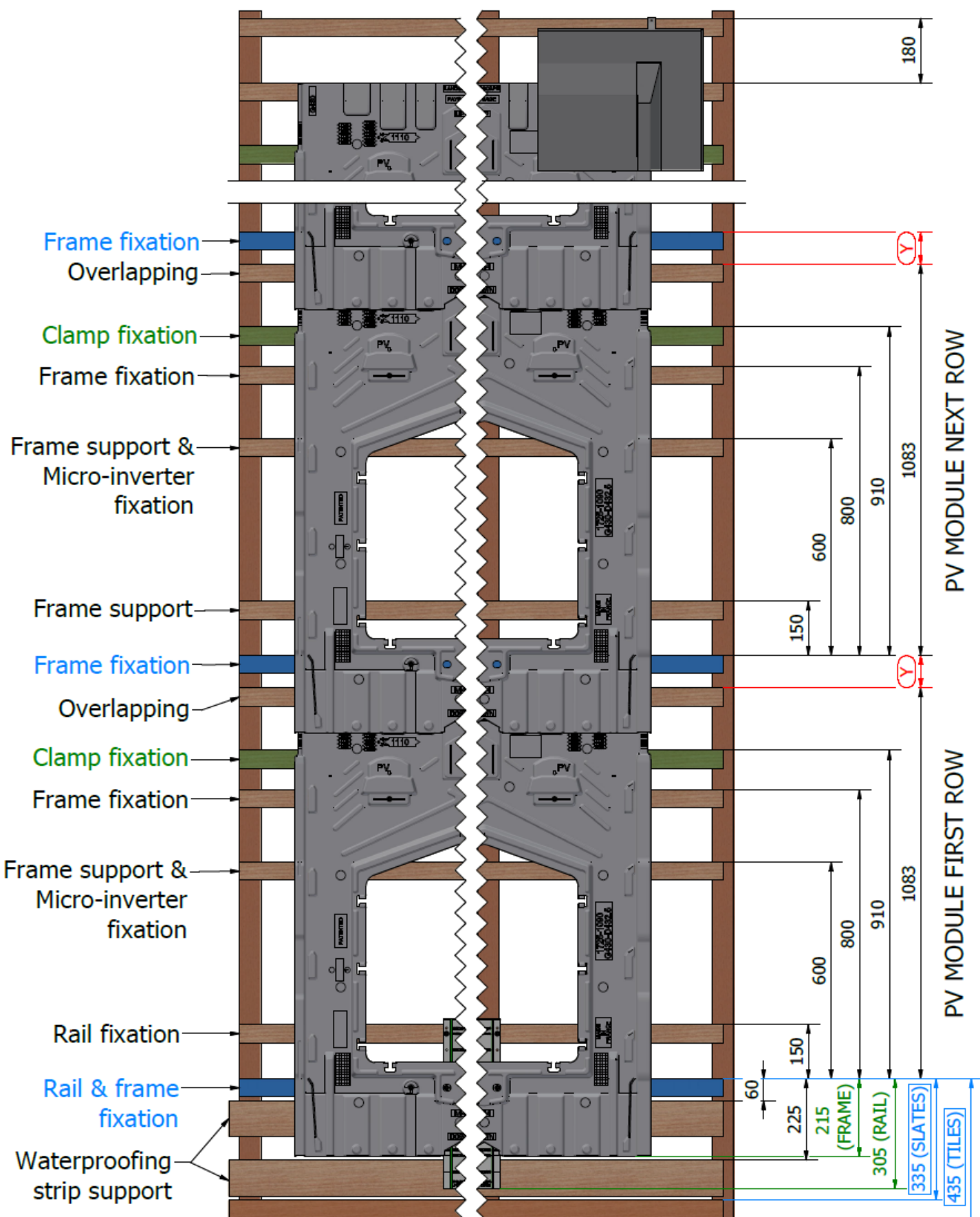
For **gutter** installation :



This measurement is from the bottom edge of the roof to the top of the reference batten.
The dimensions above apply to roofs with a pitch of more than 24°. If the pitch roof is smaller, please refer to the installation manual.

2 Install the other battens according to the first reference batten installed, following the battening plan next page.

LANDSCAPE EVOLUTION BATTENING PLAN
50MM BATTENS



3 Install the next battens

Determine the distance Y, between 45 and 105 mm depending on the width of the PV module installed.

Panel width	1090	1095	1100	1100	1110	1115	1120	1125	1130	1135	1140	1145	1150
Additional row Y	45	50	55	60	65	70	75	80	85	90	95	100	105

Arrange the remaining battens for the system in relation to the first reference batten installed:

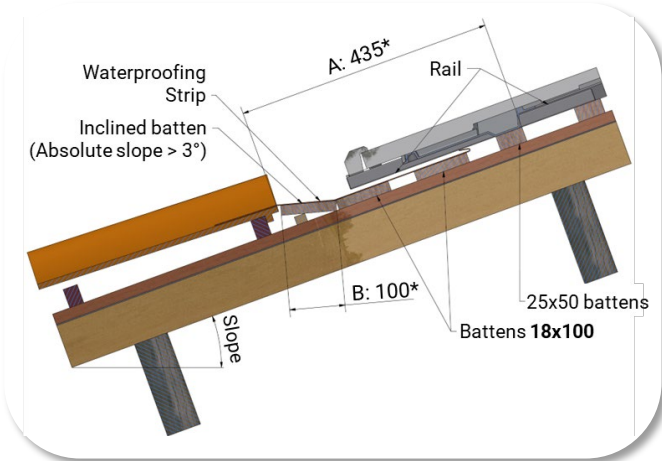
- Battens for clamps and bottom rails
- Battens for frame fixing points
- Battens to support the frames
- Support battens of **max 18 mm thick** for bottom connections.
- Battens to support the top flashings

Step 2 : Laying of the waterproofing strip

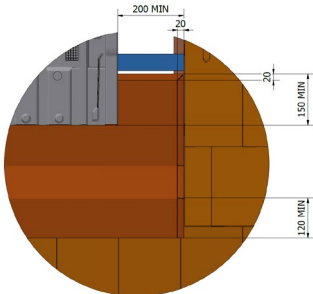
1 For roofs with interlocking tiles, flat tiles or curved tiles, install a tilt filet of width depending on the roof pitch of your project (see the installation manual)

Tilt filet is not required for slate or gutter installations.

 The thickness of the battens supporting the waterproofing strip must be max 18 mm



2 Install the waterproofing strip for bottom connection
500mm width min for interlocking tiles & 400mm for slates



Cut the strip to the length of the PV array, leaving **200 mm beyond the edge of the frames** on each side.

Be sure to lay the sealing strip on the battens and the tiles. **Dress it with a roller.** Make sure tiles are free of dust and dry.

Make a **fold** of approximately **20 mm** at the **top and sides** to prevent water **from rising**.

Add sealant on the bottom edge and both sides.

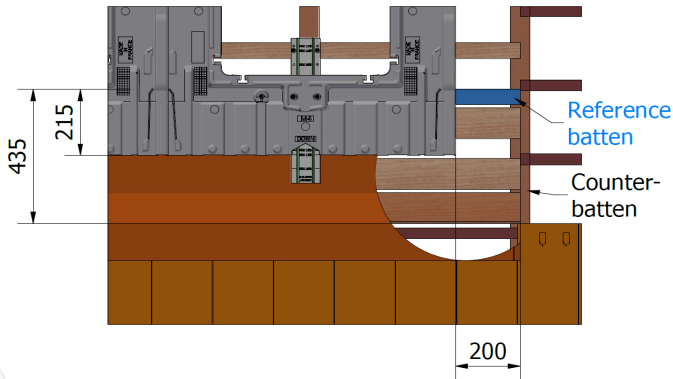
If needed, hold the strip in place at the top with flashing hooks.

Step 3 : Installation of the Landscape Evolution Frames

1 Place the first frame at the bottom right of the PV field

Align it **vertically** using the reference batten: the base of the frame must be **215 mm** from the top of the reference batten.

Align it **horizontally 200 mm** from the edge of the **bottom connection**. Make sure that it is straight.



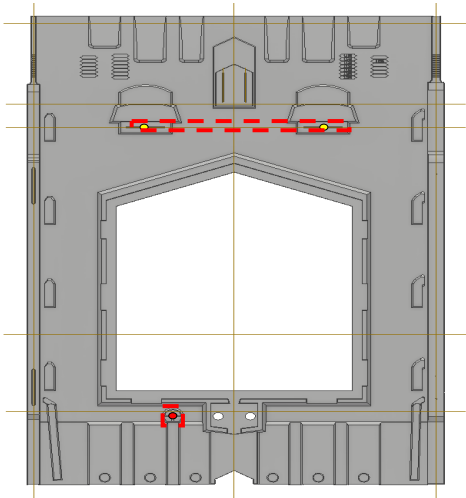
2 Fix the Landscape half-frames

Fix the 1st half-frame at its **three fixing points** with the GSE Intégration silver screw 50mm length.

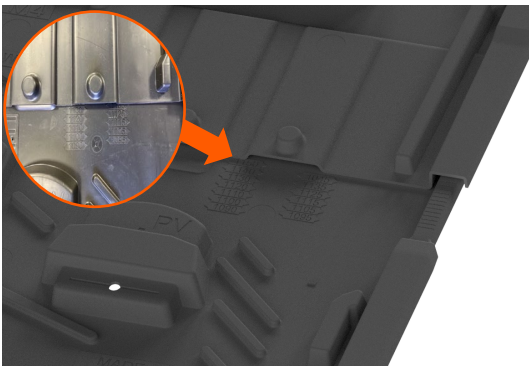
! Avoid driving the screws too far, as this may deform the frame.



! Do not drill in the drainage areas or on the support pad of the half-frame. Doing so can damage the system and its watertightness.



3 Connect the Landscape half-frames



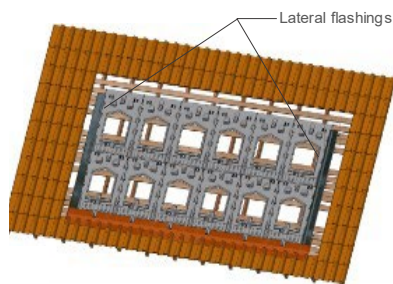
Assemble the remaining frames in the first row horizontally using the interlock of the landscape frames. Fix each frame at its 3 fixing points.

Assemble the half-frames of the upper rows at the **correct graduation according to the width of the PV module** to be installed. Fix each half-frame at its 3 fixing points.

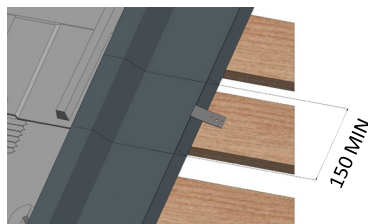


Step 4 : Installation of the (side) flashings

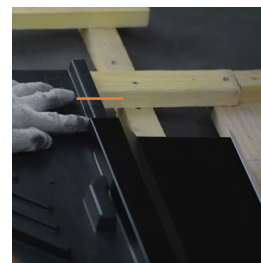
Secure all the flashings with at least 2 hooks per flashing.



Place the lateral (side) flashings at the right and left ends of the PV array.



Ensure a **minimum overlap of 150 mm** between each flashing.



Top position :

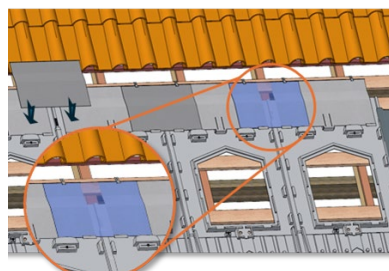
- Up to the top of the markings when installing the rigid top flashings

Step 5 : Installation of the top flashings

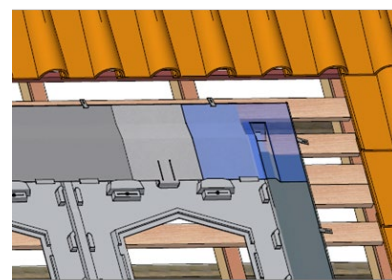
Secure all the flashings with at least 2 hooks per flashing.



Position one top flashing per half-frame on the last row.
Align the marking on the top flashing with the marking on the half-frame.

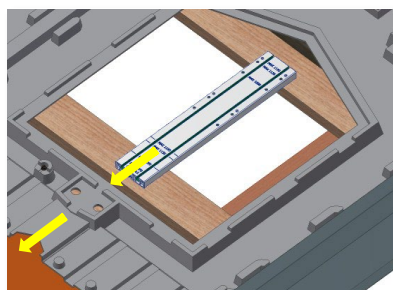


Position the junction pieces by sliding them into the side folds of the central flashings.

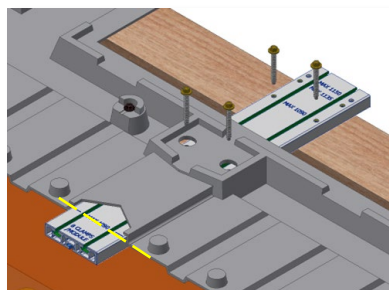


Position the corner flashings on the lateral flashings and slide them into the folds of the central top pieces located at the edges of the PV field.

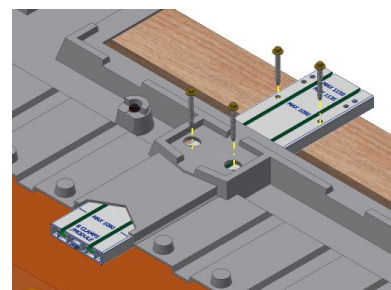
Step 6 : Installation of the bottom rails



For the bottom row of half-frames, slide the rails from the inside of the frame to the outside using the guide located at the base of the half-frame



Align the rail with the bottom edge of the frame at the graduation corresponding to the module width.



Secure the rail with 4 silver GSE Intégration screws 50 mm length.

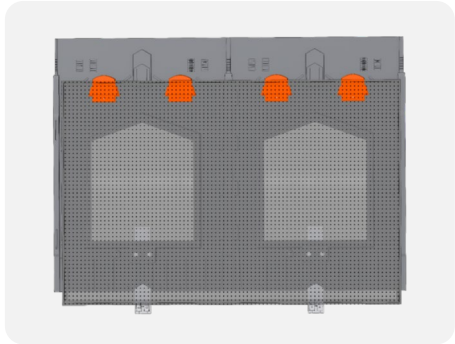


Do not pinch the half-frame.
The screws must pass through the holes in the half-frame.

Step 5 : Positioning of PV modules

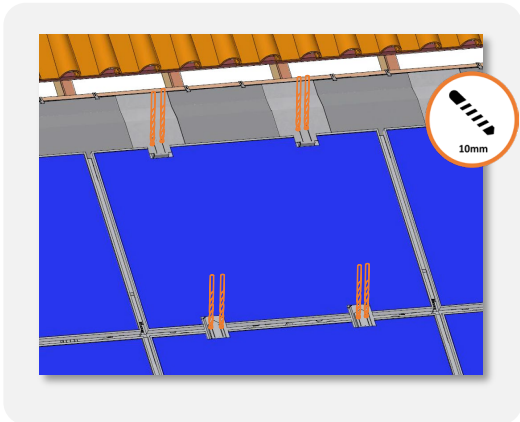
Position the modules so that **they rest on the support pads**

- ⚠ Ensure the PV modules are properly centered horizontally between the two half-frames.



Step 6 : Wiring of PV modules

To interconnect the PV modules or to connect them, route the cables **beneath the frames** using the folds in the central holes.
A jumper may be needed.



Step 7 : Drilling

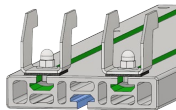
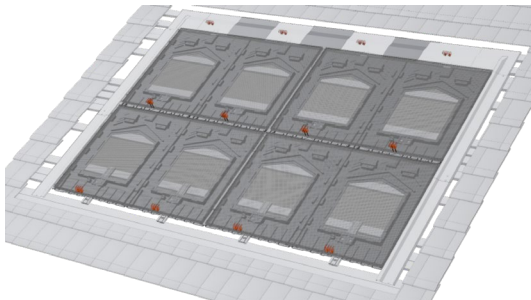
Place the clamp (top clamp or middle clamp) in its intended position and **mark the drilling point**.

Drill the fixing point using a **Ø10 mm** drill bit on all clamp fixing points as shown.

Step 8 : Clamp fixing

Fix the clamps using the **GSE black 60mm screws**, tightening until they clamp the frame of the PV module.

- ⚠ **DO NOT** use an impact driver to fix the clamps. Use a standard combi drill (with adjustable speed and torque)



For the bottom row, insert the clamps with the bolt into the rails, and tighten the nuts.

Step 9 : Pre-compressed foam

Place the pre-compressed foam on the flashings around the sides and top of the array, 20 mm from the edges of the flashings.

The seal must reach the bottom connection to prevent any ingress of water or solid particles.

Step 10 : Roof coverings

Ensure overlapping from the tiles to the top flashings

