

Solar systems by Schweizer: Short installation manual – Solrif®



100 years
Quality
Sustainability
Innovation

Scope of application

These Short installation manual form part of the currently valid 'Installation manual PV Roof Integration Solrif®' of 6.5.2019. They describe a partial roof solution and can also be applied by analogy for whole-roof solutions.



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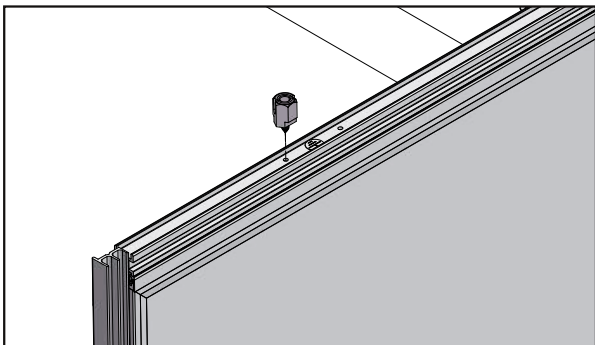
Preparation

Before installation, check that all parts and modules are present in accordance with the materials list.

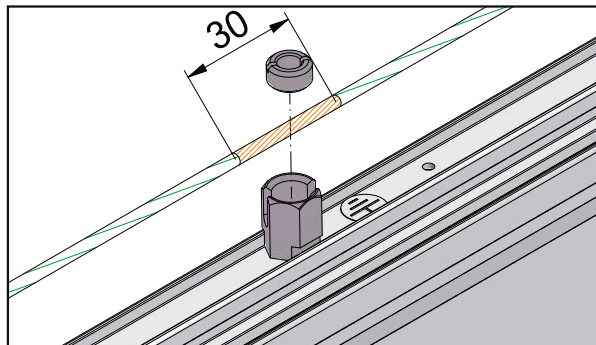
Regard must be had to the following documents:

- Solar.Pro.Tool documentation (SPT);
- electrical Planning (string plan);
- protection concepts (lightning protection, earthing, equipotential bonding);
- Roof plan;
- if applicable, the instructions of the PV module manufacturer.

If the modules are earthed, then attach the ground connector (article number 21899) as follows:



Preparation: Screw on the ground connector.



To connect: Remove 30 mm insulation of the earth cable and press into the ground connector.

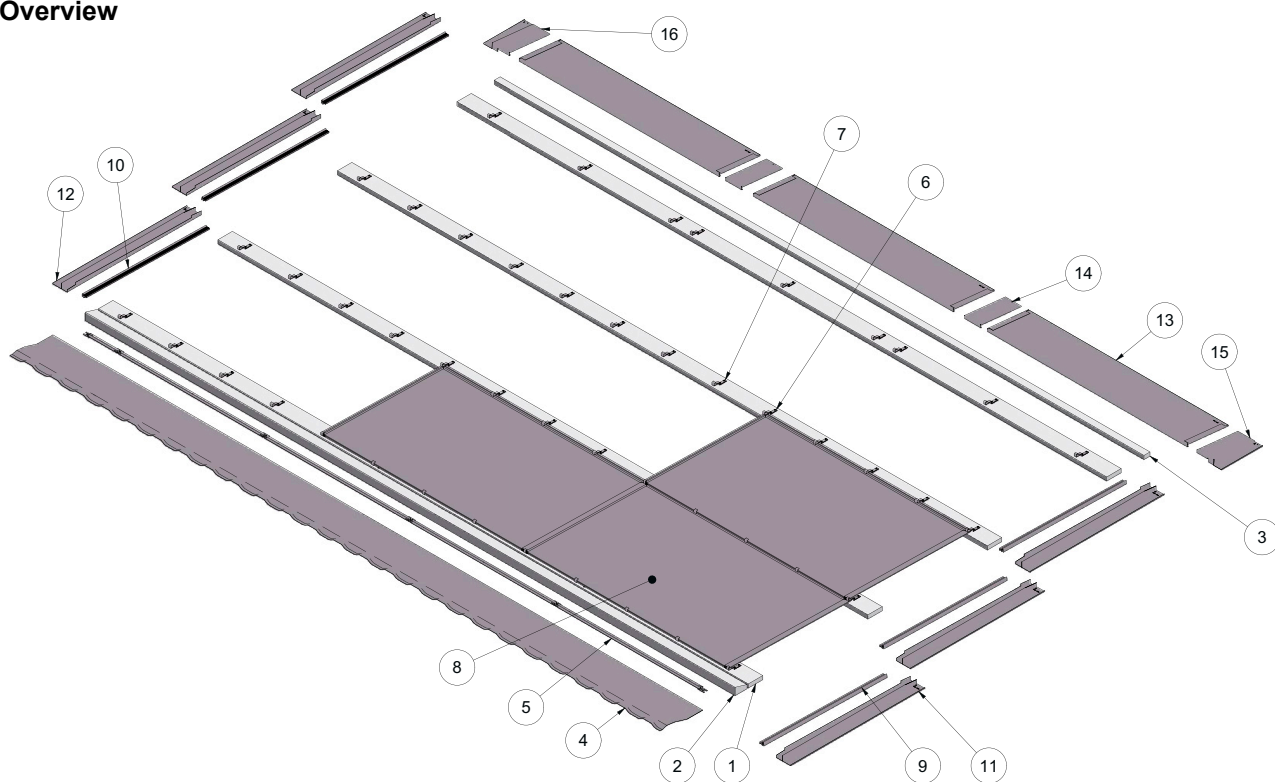
Safety



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Overview



- | | | | |
|---------------------|--------------------------|--------------------------|-------------------------|
| ① Solrif®batten | ⑤ Eaves profile | ⑨ Flashing profile right | ⑬ Top flashing |
| ② Wedge plank | ⑥ Mounting clamp profile | ⑩ Flashing profile left | ⑭ Top flashing joiner |
| ③ Supporting batten | ⑦ Mounting clamp glass | ⑪ Side flashing right | ⑮ Corner flashing right |
| ④ Connecting sheet | ⑧ Solrif® PV module | ⑫ Side flashing left | ⑯ Corner flashing left |

Materials needed for assembly

- Suitable wood screws for fastening the battens
- ① Solrif® battens 120 × 30 mm
- ② Wedge plank
- ③ Supporting batten
- SPT project report

Tools required

- Cordless screwdriver with Torx T20 bit insert
- Hammer
- Measuring equipment
(e.g. tape measure and chalk line)
- Mounting gauge (recommended)
- Guide line
- Metal saw

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Horizontal section

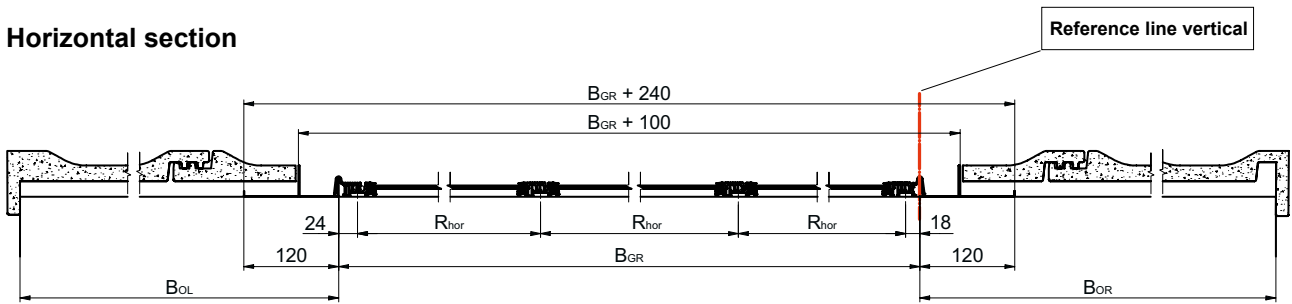


Illustration: horizontal section Solrif®

Vertical section

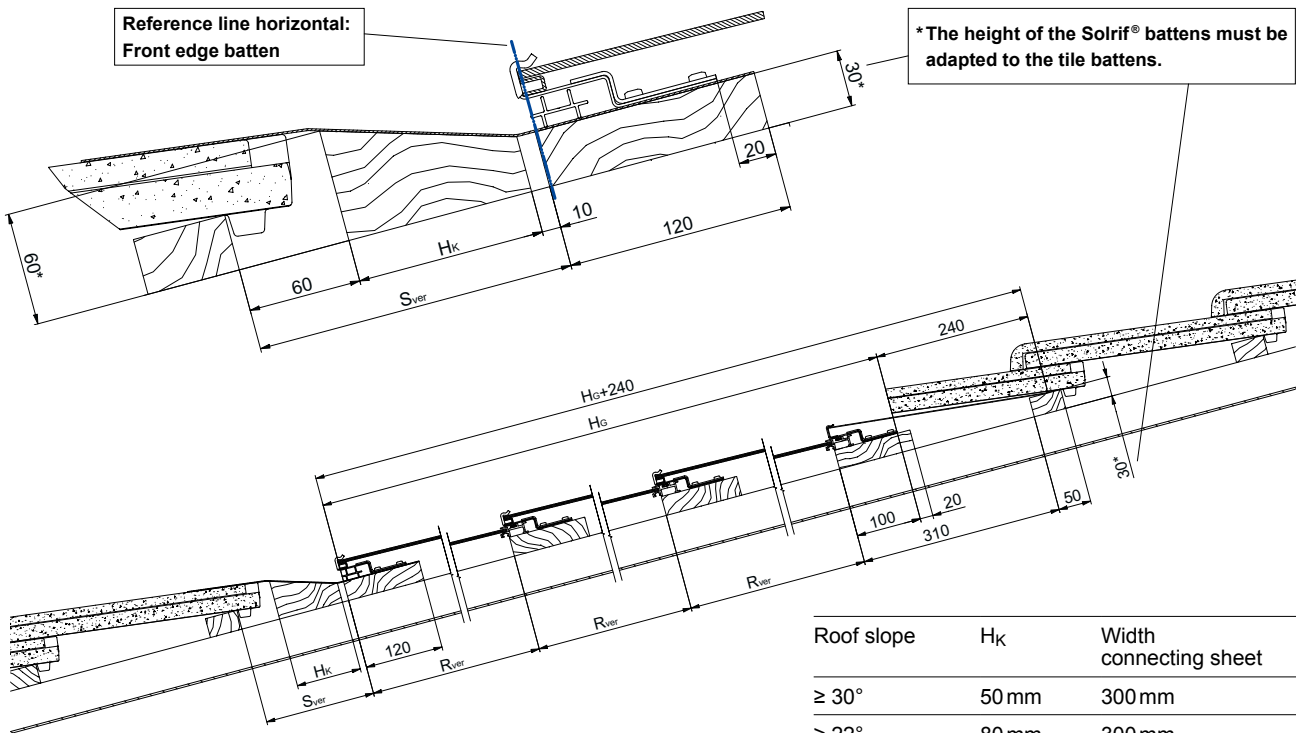


Illustration: vertical section Solrif®



SPT

These measurements may be found in the SPT report:

B_{GR}: PV field width = (R_{hor} × no. of modules horizontal) +42

B_{OL}: peripheral distance left

B_{OR}: peripheral distance right

H_G: PV field height = (R_{ver} × no. of modules vertical) +100

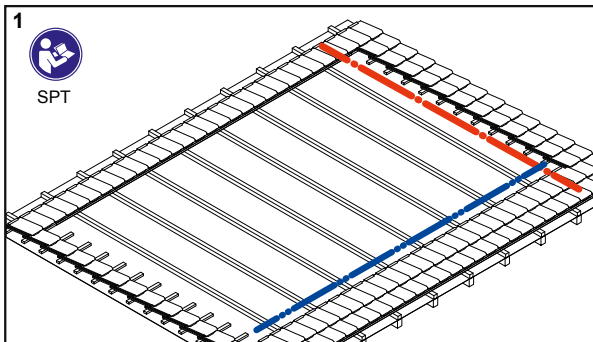
R_{hor} horizontal grid measurement = module width -18

R_{ver} vertical grid measurement = module height - 32

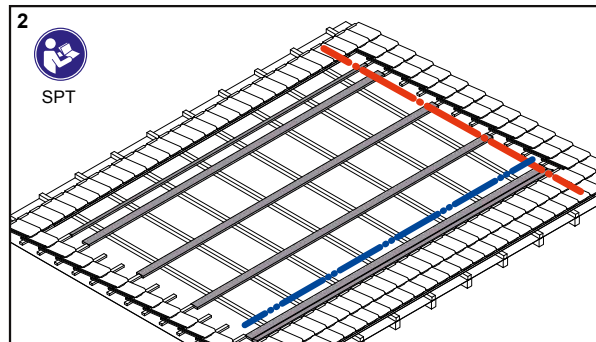
S_{ver}: distance 1st Solrif® batten

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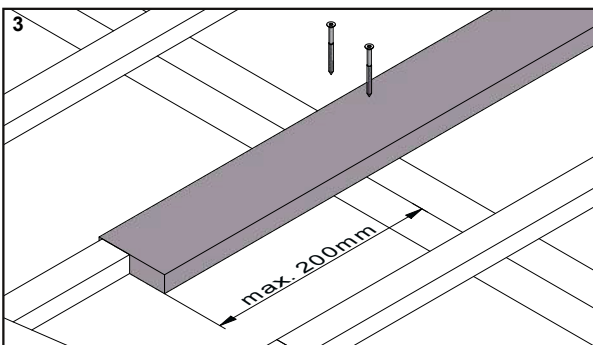
Mounting the Solrif® field



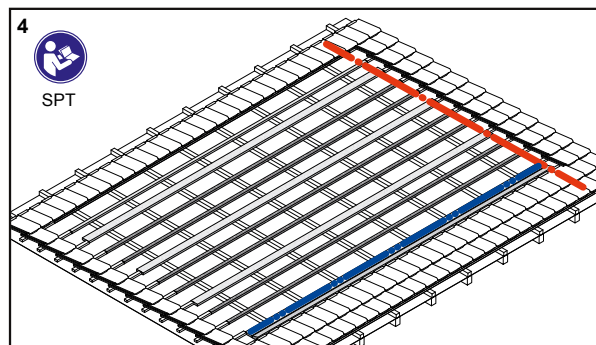
Remove tiles and, if necessary, also the tile battens in the area of the module surface on a generous scale.



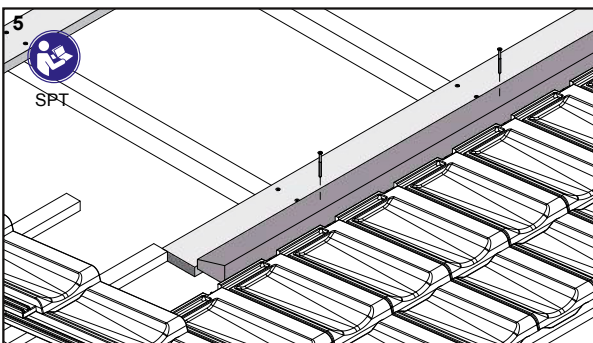
Assemble Solrif® battens, wedge plank and supporting batten in accordance with instructions.



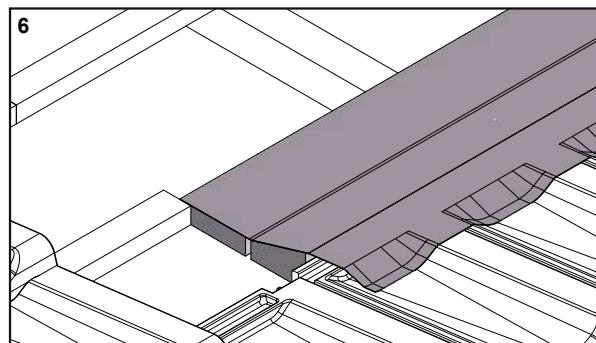
Fix Solrif® battens with suitable wood screws in the vertical grid R_{ver} .



Additional supporting battens 30 × 50 mm for high snow loads if required.

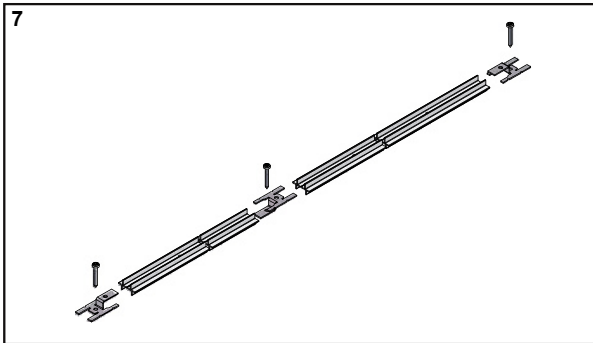


Place wedge plank.

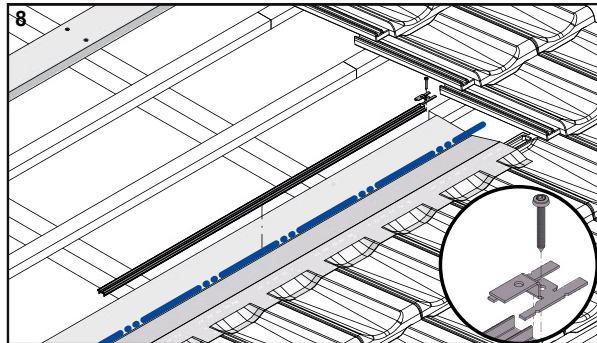


Lay connecting sheet.

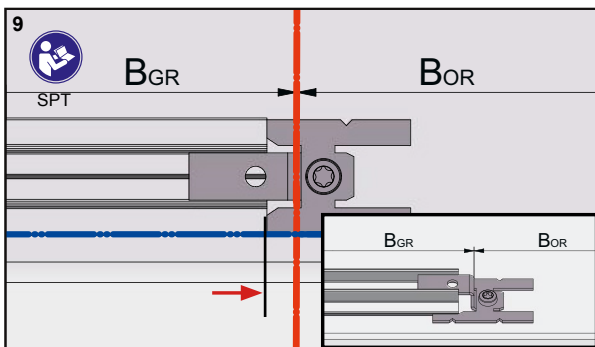
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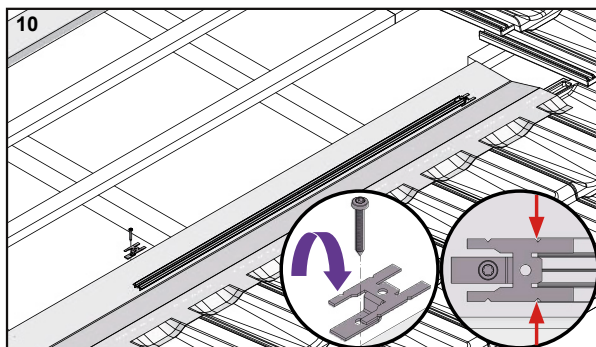
Overview of eaves profile installation.



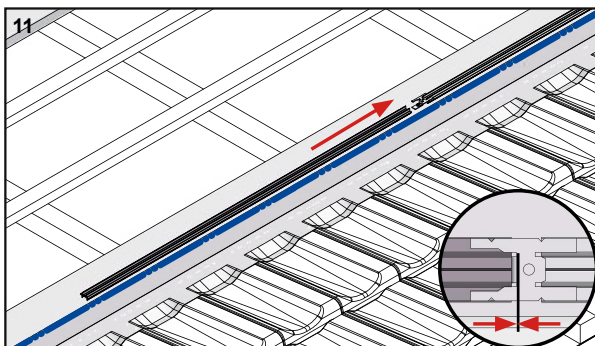
Position the eaves profile and profile fixing.



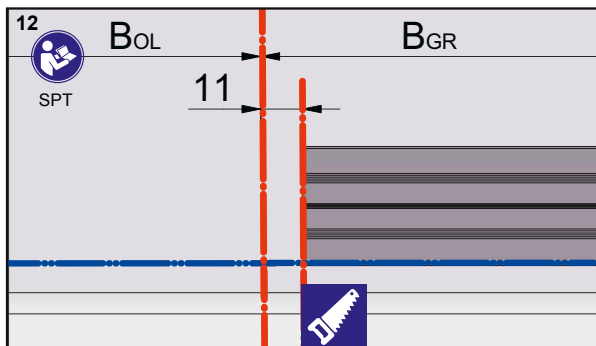
Align eaves profile with reference (blue) and profile fixing to B_{OR} . Insert eaves profile up to the stopping point of the profile fixing.



Turn and screw the profile fixing.
Observe position marks: approx. 3 mm clearance to the end of the eaves profile.

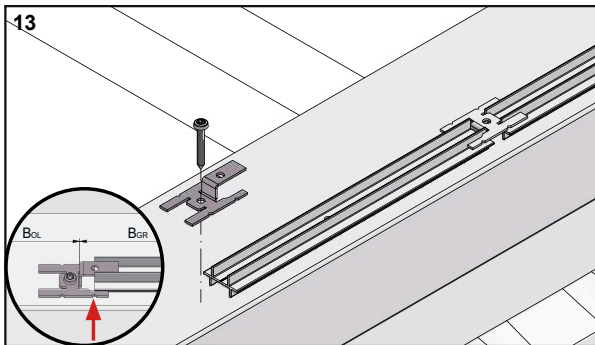


Slide the next eaves profile under the profile fixing to the stopping point and align with the reference. Repeat until the end of the PV field.

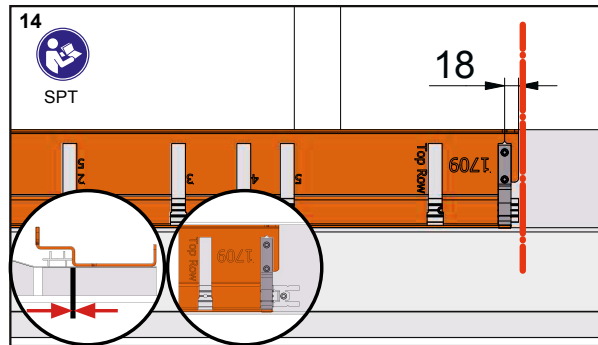


Shorten last eaves profile compared to B_{GR} by a minimum of 11 mm.

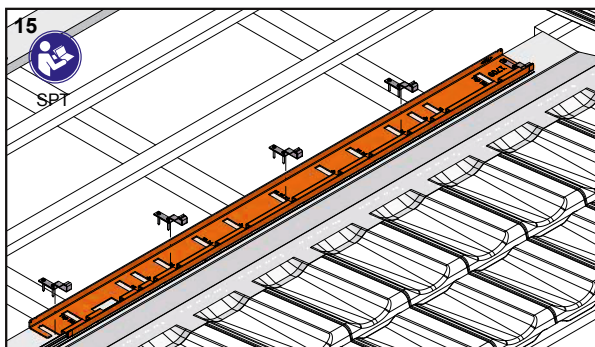
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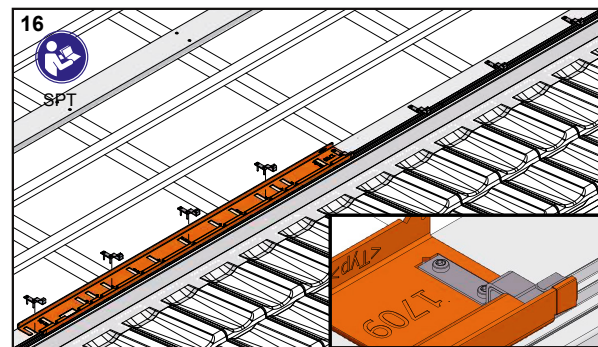
Place and screw the last profile fixing.
Have regard to the position marks.



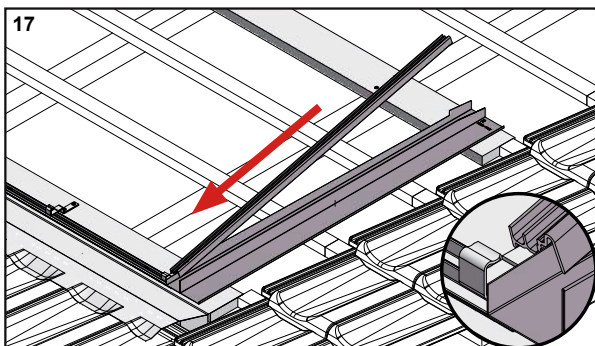
Fasten the mounting gauge to the eaves profile,
place the mounting clamp profile with the help
of the mounting gauge.



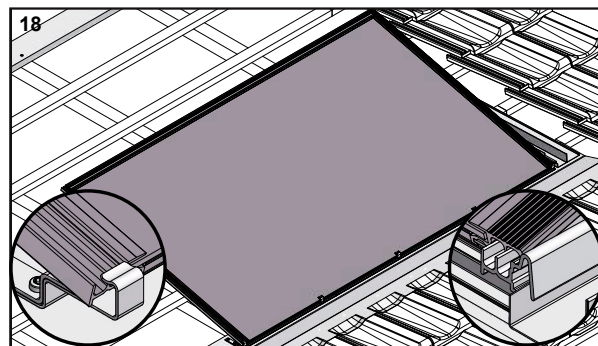
Screw on further mounting clamps profile and
glass (number as per SPT report).



Attach further mounting brackets for the following
modules.

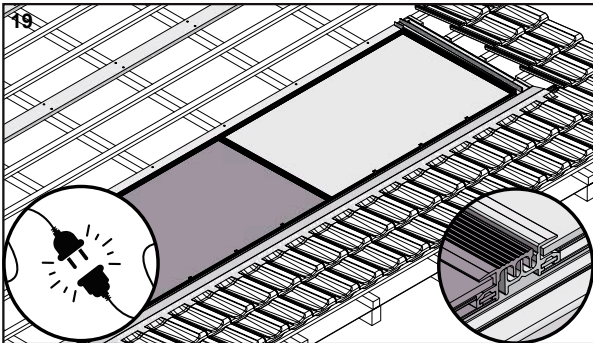


Insert right side flashing with flashing profile into
bracket.

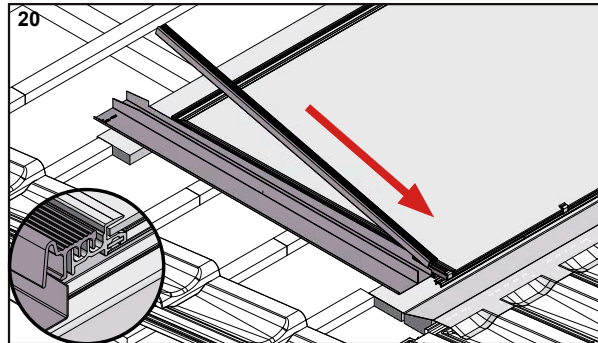


First place the module with the left frame profile in
the mounting bracket, then lay it down.

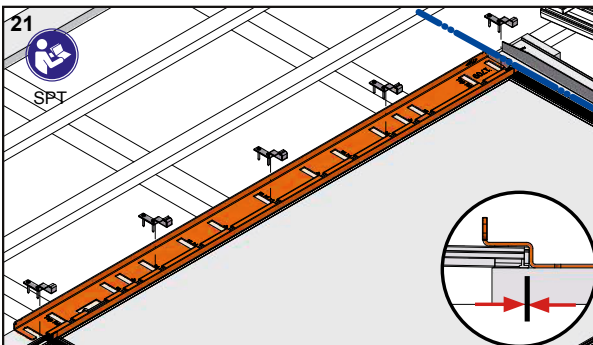
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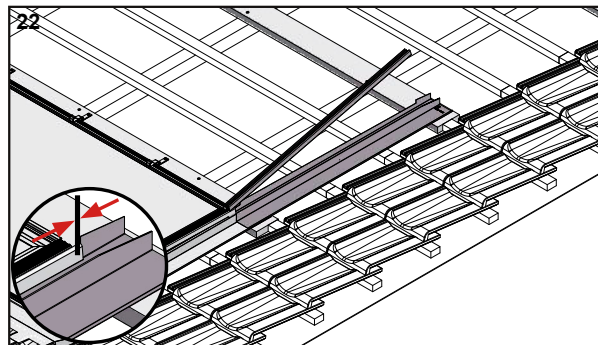
Lay further modules and connect electrically.



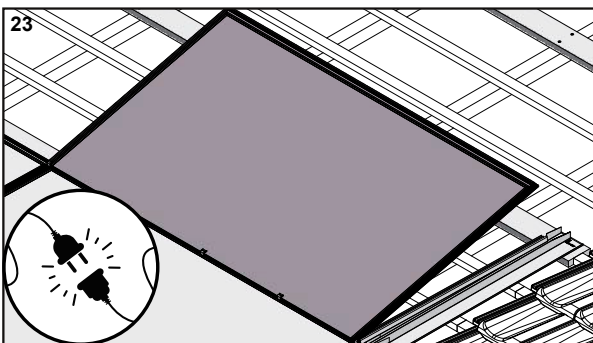
Close off at the left edge with side flashing and flashing profile.



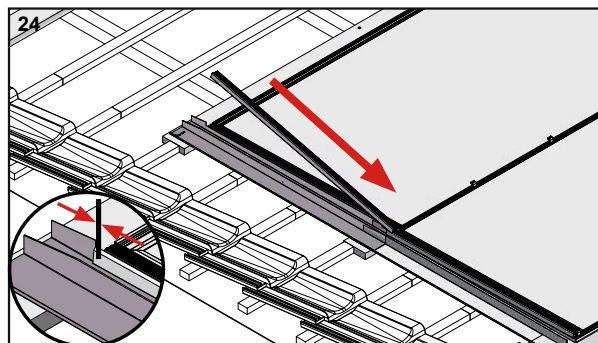
Mount the next row of mounting clamps.
If you are working without a mounting gauge,
leave 15 mm distance between mounting clamp
and module.



Insert the connection plate and edge profile in the
profile bracket as far as they will go.

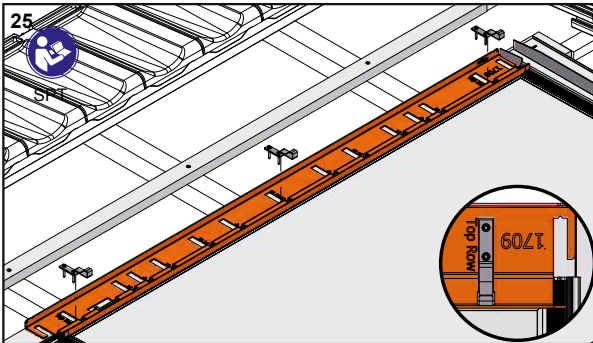


Lay further modules and connect electrically.

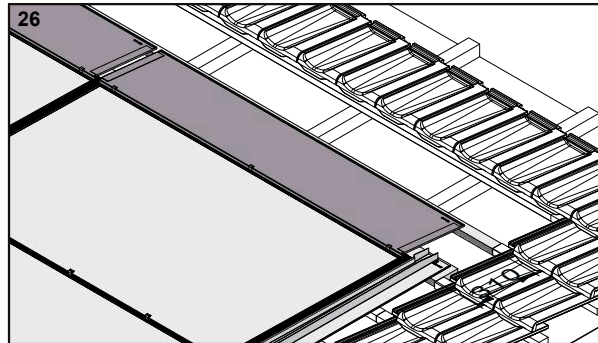


Close off on the left with side flashing and flashing
profile.

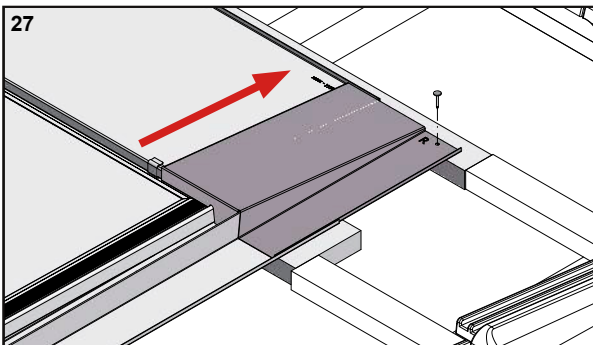
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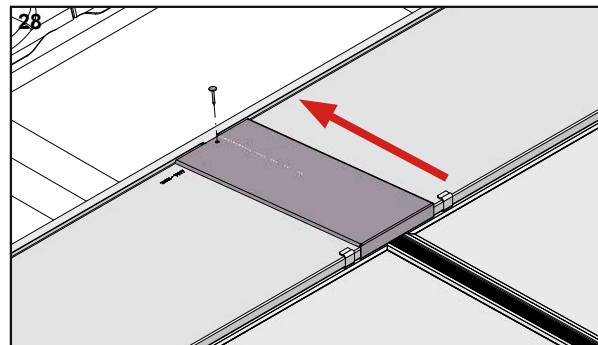
Lay top profile bracket row ('top row' position).



Insert top flashing.

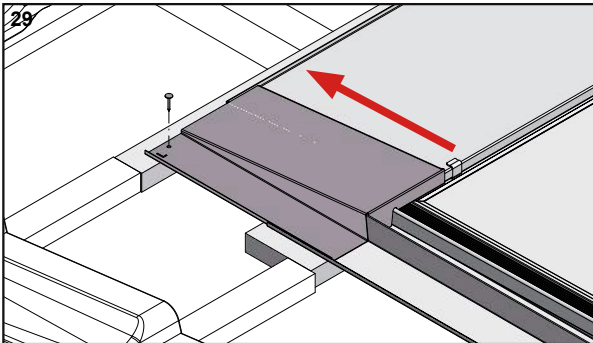


Insert and fix corner flashing right.

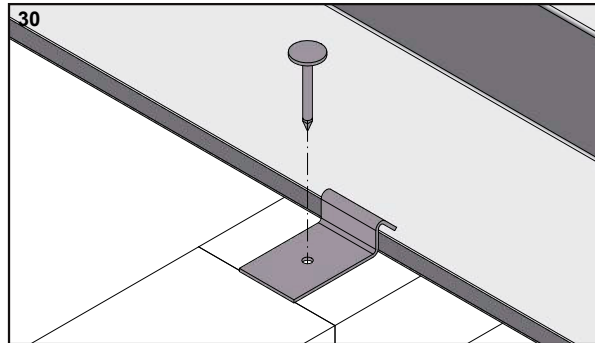


Insert and fix top flashing joiner.

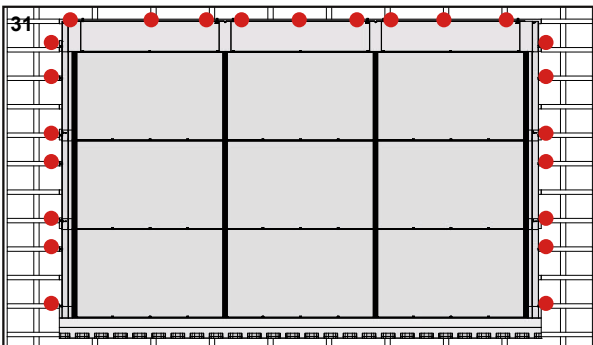
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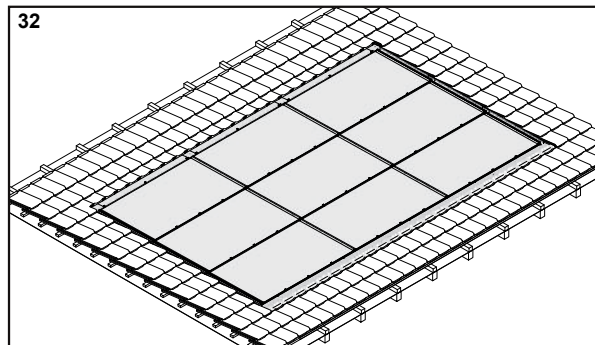
Insert and fix corner flashing left.



Attach fixing for flashing.



Flashing fixing positions:
2 per side flashing;
3 per top flashing;
1 per corner flashing.



Replace tiles on roof, where necessary adjust
and fix the tiles in a professional manner.