EASY ROOF TOP

ON ROOF MOUNTING SYSTEM FOR PHOTOVOLTAIC AND THERMAL MODULES

Installation Instructions

INS-IN02-180718 – version 1.6 de 2022 v1

Contents

Contents

1) Safety Instructions

Design, installation, and commissioning of the system must be performed by qualified personnel only. Incorrect execution can result in damage to the system and can put lives in danger.

National and local construction standards, the various regulations and all directives in force concerning environmental protection must be observed. Safety regulations and accident prevention instructions must be observed. Appropriate fall prevention devices must be used for all work performed at height.

It is your responsibility, before installation, to check the load capacity of the roof and the system statics using the **MY SOLAR PROJECT** sizing tool.

Before installation, check that you have the up-to-date version of the installation instructions by visiting our website: www.edilians.co.uk
Throughout the installation operation, make sure that at least one copy of the installation instruction manual is available on site.

Please be aware of the installation instructions provided by the manufacturer of the photovoltaic modules or thermal sensors.

To remove the system, apply the installation procedure in reverse.

Systems installed in accordance with the safety and implementation instructions are eligible for a 10-year product guarantee.

The initial structure might not be designed to support the additional weight of photovoltaic equipment.
A structural calculation might be necessary to ensure a successful installation and to choose the correct mounting methods.
The fitter is responsible for performing this check.

2) Field of use

Implementation:

Used in mainland France:

- Except in mountain environments at an altitude above 900 m.
- Maximum wind zone: 4
- Must be located more than 3 km from the seaside. (Seaside installation not allowed)
- Seismic zone (up to Zone 4 for Occupancy Category III)
- On insulated or non-insulated buildings, exclusively on a cold roof
- Only in places with low or intermediate humidity, in a healthy environment.
- For roofing made of small elements (tiles and slates), the length of the roof slope must not exceed 12 m.
- The space between the ridge and the edge of the field must be greater than 50 cm.
- The space between the roof edges and the edges of the field must be greater than 40 cm.
- The system can be used on traditional roof structures (with or without built-in battening) and on truss-type industrialised wooden structures with restrictions due to the strength of the structure and the correct installation of screws and hooks on it.
- The presence of a film for the recuperation of the condesate is inseperable from the PV field. This film is mandatory regardless the slope of the roof.
- The PV system must not exceed 25 m at the ridge with respect to the lowest level of the surrounding ground.

Maximum slopes
- **On TILE ROOFING:**

The angle of the roof slope is limited to 50° (119%), and the maximum length of the slope is: 12 m.
- **On SLATE ROOFING:**

The angle of the roof slope is limited to 60° (173%), and the maximum length of the slope is: 12 m
- **On FIBRE CEMENT SHEET ROOFING:**

The angle of the roof slope is limited to 60° (173%), and the maximum length of the slope is given in Table 1 of DTU 40.37 P1-1 - Corrugated fibre cement sheets (September 2011).

Minimum slopes: refer to the following DTUs (Unified Technical Documents):
-DTU 40.21 P1-1 - **Clay tiles**: interlocking or plain profiled
-DTU 40.22 - **Curved (canal) clay tiles**
-DTU 40.24 - **Concrete tiles:** plain and longitudinal interlocking
-DTU 40.11 – **Slates**
-DTU 40.13 P1-1 - **Fibre cement slates**
-DTU 40.37 P1-1 - Corrugated fibre cement **sheets**

Use outside France:
Roofing must comply with the regulations in force in each country.

Design aid:
MY SOLAR PROJECT

3) Installation guide

3.1) Parts List

		N°	Description	New reference	Former reference
FIELDS OF APPLICATION	MECHANICAL TILES (see details p.7)	1	TOP HOOK BASE TILE 150	092447	PRT0P00403A
		2	TOP HOOK TILE ASSY 65-152	092420	ASM0P00528A
		3	TOP HOOK TILE ASSY 65-152 BLACK	092422	ASM0P00528NA
		4	DOME-HEAD SCREW 6*70	092367	V077V02
		5	DOME-HEAD SCREW 6*40	092351	V003V02
		30	TOP HOOK BASEPLATE TILE 8-28-1250	092458	PRT0P00569A
		31	TOP SCREW ASSY M8*150	092379	V084V02
		42	TOP SCREW ASSY M8*200	092386	V140V02
		32	TOP SCREW SUPPORT M8	092594	PRT0P00693A
		33	ADAPTER PLATE 82*40*5	092343	PDC0P00572A
		35		092698	PRT0P00907A
		36		092696	ASM0P00906A
	FLAT TILE SLATES (see details p.8)	6	TOP HOOK SLATE	092478	PDC0P00564A
		7	ADJUSTABLE TOP HOOK SLATE	092480	PDC0P00565A
		8	COUNTERSUNK SCREX 6*50	092369	V079V02
		9A	HEX SCREW M8*20	092365	V068V02
		9B	HAMMER HEAD SCREW M8*20 (OPTION)	092377	V083V02
		10	NUT M8 SERRATED FACE	092362	V066V02
	SHEETS (see details p.8)	11	DOUBLE THREAD SCREW ASSY 10*200 M10	092375	V081V02
		12	FIBRE CIMENT JOINT 8,4*25	092373	V080V02
PARTS COMMON TO ALL APPLICATIONS (see details p.9)		13	TOP RAIL STD 2360	092919	
		43	TOP RAIL STD 3500	092611	PRT0P00909A
		44	TOP RAIL STD 3500 BLACK	092613	PRT0P00909NA
		14	TOP RAIL STD 2360 BLACK	092920	
		15	TOP JOINT BAR ASSY STD 150	092437	ASM0P00530A
		16	TOP DOUBLE CLAMP ASSY	092431	ASM0P00529A
		17	TOP DOUBLE CLAMP ASSY (BLACK)	092434	ASM0P00529NA
		18	TOP CLIP MODULE	092743	PDC0P00490A
		19	TOP SINGLE CLAMP ASSY	092542	ASM0P00562A
		20	TOP SINGLE CLAMP ASSY (BLACK)	092547	ASM0P00562NA
		21	TOP RAIL CLOSURE ASSY	092569	ASM0P00563A
		22	TOP RAIL CLOSURE ASSY (BLACK)	092571	ASM0P00563NA
		23	EASY GROUNDING	092700	PRT0P00340A
		37			PRT0P00909A
		38	TOP RENFORT RAIL	092609	PRT0P00901A
PART NOT SUPPLIED BUT ESSENTIAL (see details p.9)		40	POLYURETHANE FOAM SEAL		
		41	SHEET		

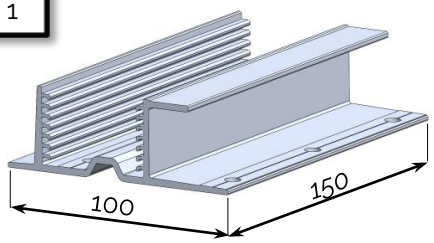
3.2) Representation of parts

COMPONENTS TO BE CHOSEN ACCORDING TO FIELD OF APPLICATION

⇨ MECHANICAL TILES

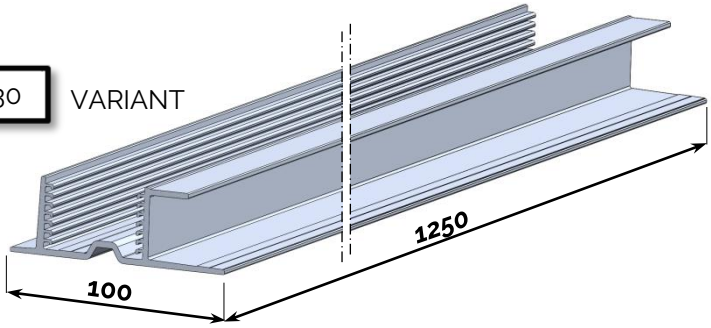
(See installation starting on p.19)

1



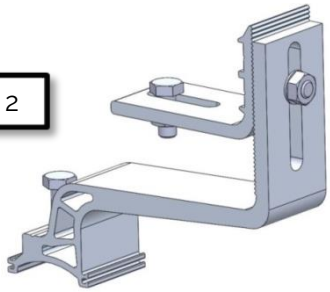
TOP HOOK BASEPLATE TILE 8-28 150

30 VARIANT



TOP HOOK BASEPLATE TILE 8-28 1250

2



TOP HOOK TILE ASSY 65-152

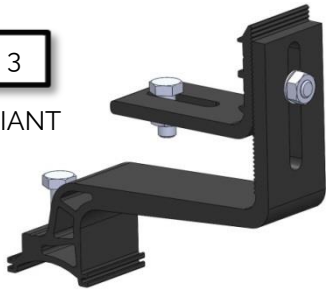
31

42

TOP SCREW ASSY M8

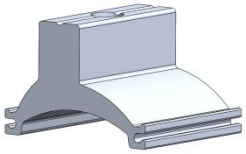
3

VARIANT



TOP HOOK TILE ASSY 65-152
BLACK

32

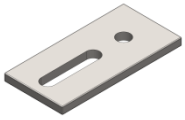


TOP SCREW SUPPORT M8

4

DOME-HEAD SCREW 6 x 70

33



TOP ADAPTER PLATE 82x40x5

5

DOME-HEAD SCREW 6 x 40

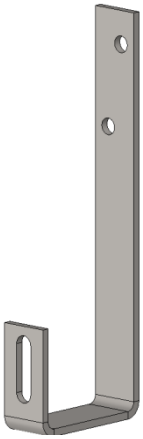
3.2) Representation of parts

COMPONENTS TO BE CHOSEN ACCORDING TO FIELD OF APPLICATION

⇨ *SLATES & FLAT TILES*

(See installation starting on p.38)

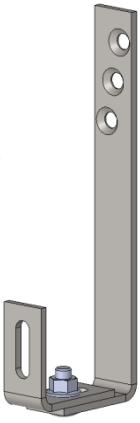
6



TOP HOOK SLATE

7

VARIANT



TOP HOOK SLATE ADJUSTABLE

8

COUNTERSUNK SCREW 6x50

⇨ *STEEL SHEETS (RIBBED)*
FIBRE CEMENT
'SOUS TUILE' PANELS

(See installation starting on p.45)

11

DOUBLE THREAD SCREW ASSY 10 x 200 M10

12

VARIANT

FIBRE CEMENT JOINT 8.4*25

9A

HEX SCREW M8 x 20

9B

HAMMERHEAD SCREW M8 x 20 (OPTION)

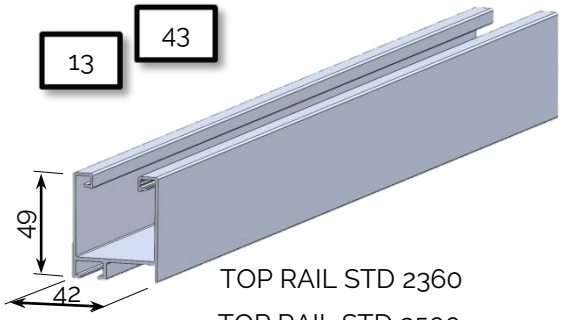
10

NUT M8 SERRATED FACE

Representation of parts (continued)

PARTS COMMON TO ALL APPLICATIONS

13 43



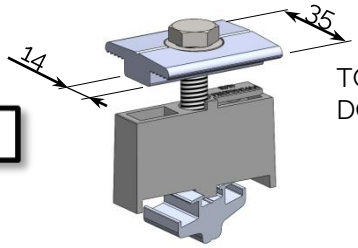
TOP RAIL STD 2360
TOP RAIL STD 3500

14 44

VARIANT

TOP RAIL STD 2360 BLACK
TOP RAIL STD 3500 BLACK

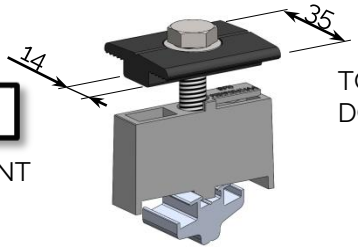
16



TOP CLAMP ASSY DOUBLE

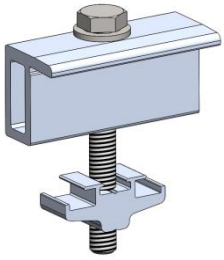
17

VARIANT



TOP CLAMP ASSY DOUBLE BLACK

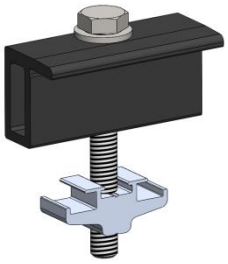
19



TOP CLAMP ASSY SIMPLE

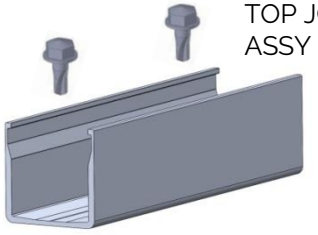
20

VARIANT



TOP CLAMP ASSY SINGLE BLACK

15



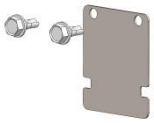
TOP JOINT BAR ASSY STD 150

18

VARIANT

TOP CLIP MODULE

21



TOP CLOSURE ASSY RAIL

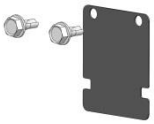
PART NOT SUPPLIED BUT ESSENTIAL

40

SEAL MADE OF POLYURETHANE FOAM THICKNESS: 60 mm.

22

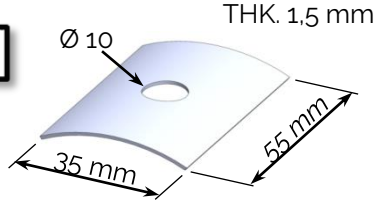
VARIANT



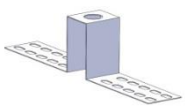
TOP CLOSURE ASSY RAIL BLACK

Zinc, aluminium or stainless-steel Plate THK. 1,5 mm

41

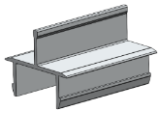


23



EASY GROUNDING

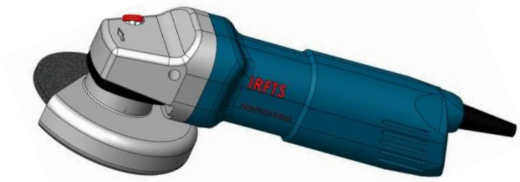
38



TOP RENFORT RAIL

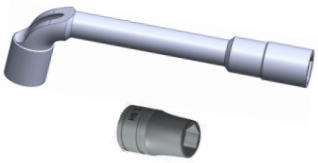
3.3) Tools

Drill / Screwdriver
+ Torx TX 25 tip
+ Drill bits Ø 7; Ø 14



Angle grinder
+ Diamond disc

Tape measure

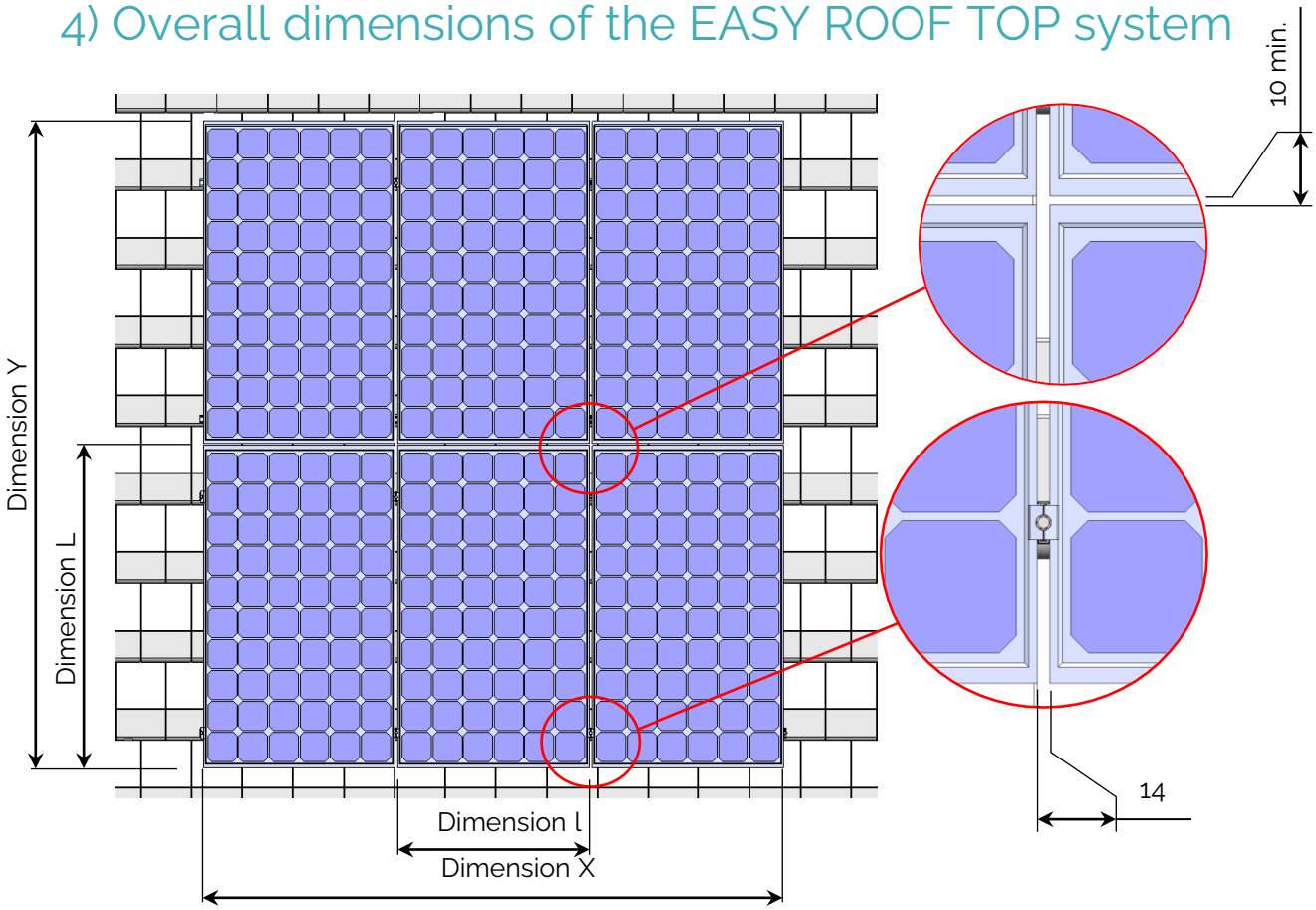


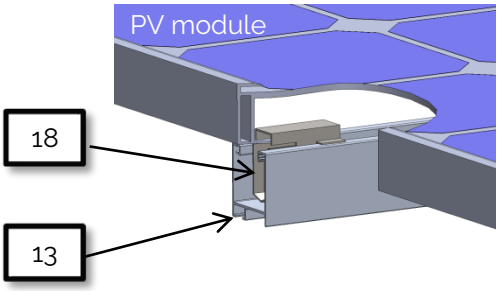
Socket spanner 9 or socket spanner

13-mm flat or socket spanner
+
15-mm flat or socket spanner

Roofer's stick
(To shape the lead sheets
in the case of laying on
SLATES & FLAT TILES.)

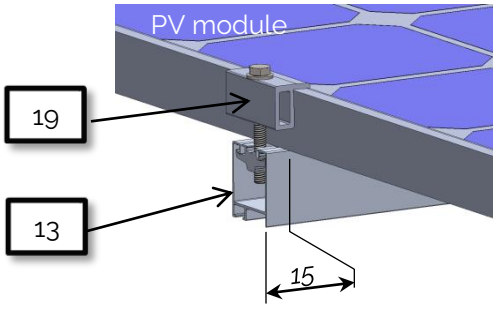
4) Overall dimensions of the EASY ROOF TOP system





→ Value of dimension X

with TOP CLIP MODULE 18
X = (l x N) + (14 x (N-1))
with N = Number of PV modules on the line.



→ Value of Dimension X

with TOP SINGLE CLAMP ASSEMBLY 19
X = (l x N) + (14 x (N-1)) + (15 x 2)
with N = Number of PV modules on the line.

→ Value of Dimension Y

X = (L x N) + (10 min x (N-1))
with N = Number of PV modules on the column.

5) GENERAL CASE WITH MECHANICAL TILES or SLATES

The following tables are provided for information.
EDILIANS is not responsible for the data they contain.
Only the results of the **MY SOLAR PROJECT** tool are authoritative.
The fitter is responsible for confirming the data concerning his/her project using the **MY SOLAR PROJECT** tool.

PORTRAIT mode

Field of use (for all other fields of use: see **MY SOLAR PROJECT**)
- Excluding seaside areas
- Gable roof
- Roof slope = 25°
- Roof length = 15 m
- Roof width = 8 m
- Ridge height: 12 m
- Zone 5 consult Solar Project
- Land category: IIIa

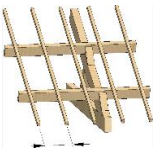
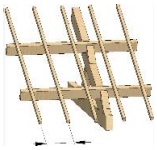
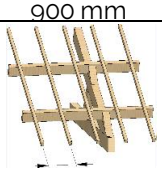
LANDSCAPE mode

Field of use (for all other fields of use: see **MY SOLAR PROJECT**)
- Excluding seaside areas
- Gable roof
- Roof slope = 25°
- Roof length = 15 m
- Roof width = 8 m
- Ridge height: 12 m
- Zone 5 consult Solar Project
- Land category: IIIa
- Rafter or truss spacing <900 mm

5.1) IN PORTRAIT MODE

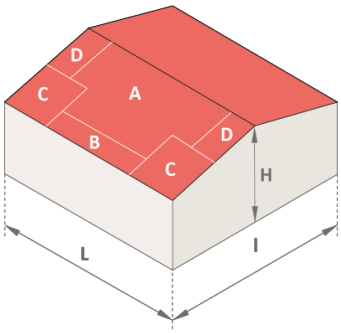
Max. authorised offset between module edge and hook (m)

	Zones 1 to 3	Zone 4
Roof Zone A	0,4	0,3

Roof Zone	Rafter or truss spacing	Snow zone	Wind Zone 1 Reference diagram / Altitude (m) ≤ 200	Wind Zone 1 ≤ 500	Wind Zone 1 ≤ 900	Wind Zone 2 ≤ 500	Wind Zone 2 ≤ 900	Wind Zone 3 ≤ 200	Wind Zone 3 ≤ 500	Wind Zone 3 ≤ 900	Wind Zone 4 ≤ 500	Wind Zone 4 ≤ 900
Main field A	 Spacing ≤ 600 mm	A1	cf1			cf1		cf1				cf2
		A2										
		B1										
		B2						cf1				
		C1	cf1			cf1	cf1					
		C2						cf1		cf1		
		D					cf2			cf2		
		E	cf1		cf2							
	 600 mm > Spacing ≤ 900 mm	A1	cf1			cf1	cf1	cf2				cf2
		A2					cf2					
		B1										
		B2						cf2				
		C1	cf1		cf1	cf1	cf1					
		C2			cf2							
		D				cf2	cf2	cf2				
		E	cf1	cf2								
	 900 mm > Spacing ≤ 1200 mm	A1	cf2			cf2		cf2				cf2
		A2										
		B1										
		B2						cf2				
		C1	cf2			cf2	cf2					
		C2						cf2		cf2		
		D										
		E	cf2									

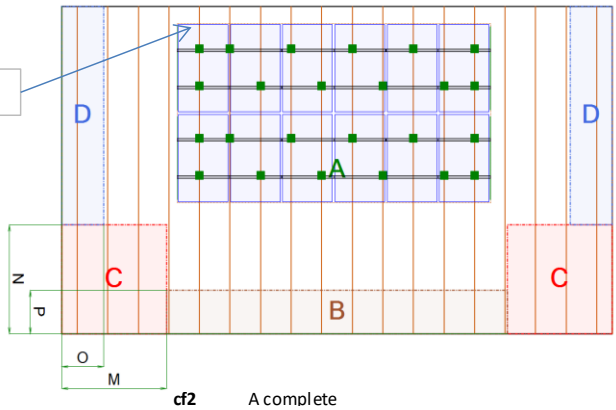
Non-existent combination

Excessive loads

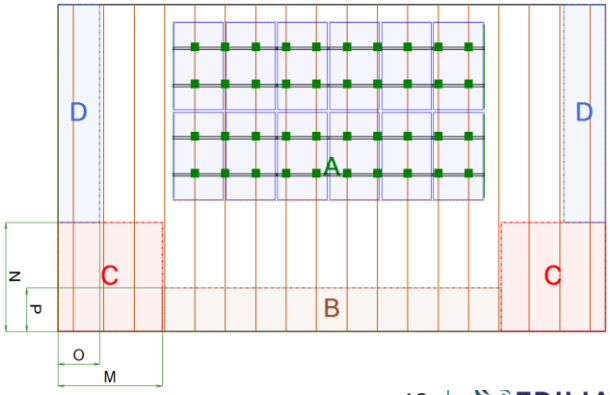


Hooks

cf1 A partial



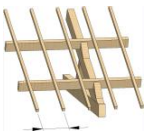
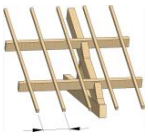
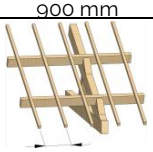
cf2 A complete



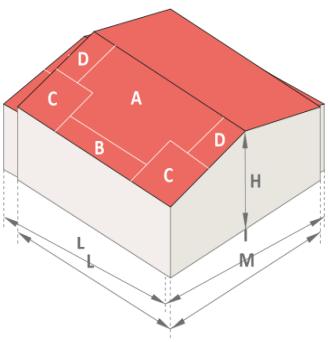
M = the smaller of the following two dimensions: L/4 or H/2
N = the smaller of the following two dimensions: l/4 or H/2
O = the smaller of the following two dimensions: l/10 or H/5
P = the smaller of the following two dimensions: L/10 or H/5

Max. authorised offset between edge of module an

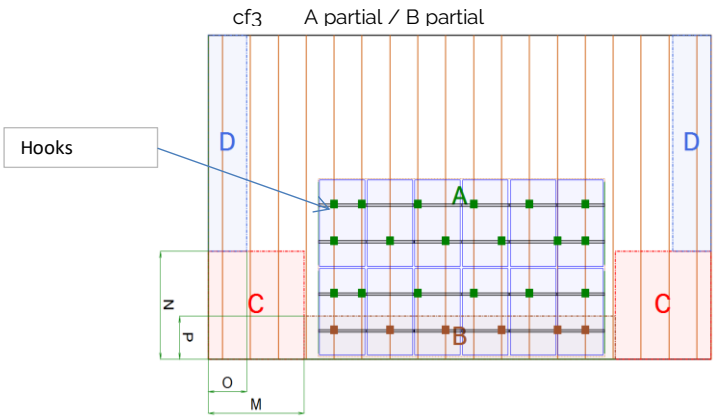
	Zone 1 to 3	Zone 4
Roof Zone B	0.3	0.2

Roof Zone	Rafter or truss spacing	Snow zone	Wind Zone 1 Reference diagram / Altitude (m) ≤ 200	Wind Zone 1 ≤ 500	Wind Zone 1 ≤ 900	Wind Zone 2 Reference diagram / Altitude ≤ 500	Wind Zone 2 ≤ 900	Wind Zone 3 Reference diagram / Altitude ≤ 200	Wind Zone 3 ≤ 500	Wind Zone 3 ≤ 900	Wind Zone 4 Reference diagram / Altitude ≤ 500	Wind Zone 4 ≤ 900
Main field B	 Spacing ≤ 600 mm	A1	cf3			cf3		cf4				cf5
		A2										
		B1										
		B2						cf4				
		C1	cf3			cf3	cf3					
		C2						cf4		cf3		
		D					cf5			cf5		
		E	cf3		cf5							
	 600 mm > Spacing ≤ 900 mm	A1	cf3			cf3	cf3	cf5				cf5
		A2					cf4					
		B1										
		B2						cf5				
		C1	cf3		cf3	cf3	cf3					
		C2			cf5							
		D				cf5	cf5	cf5				
		E	cf3	cf5								
	 900 mm > Spacing ≤ 1200 mm	A1	cf5			cf5		cf5				
		A2										
		B1										
		B2						cf5				
		C1	cf5			cf5	cf5					
		C2						cf5		cf5		
		D										
		E	cf5									

Non-existent combination
Excessive loads

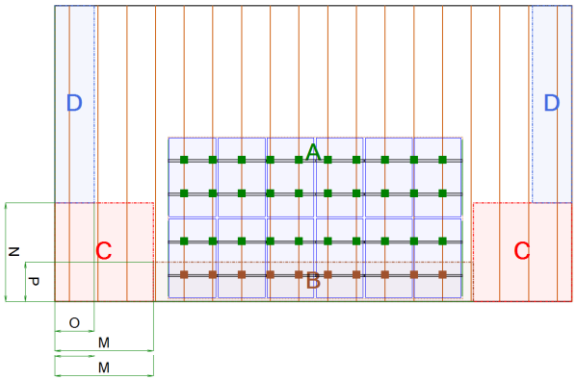


cf3 A partial / B partial

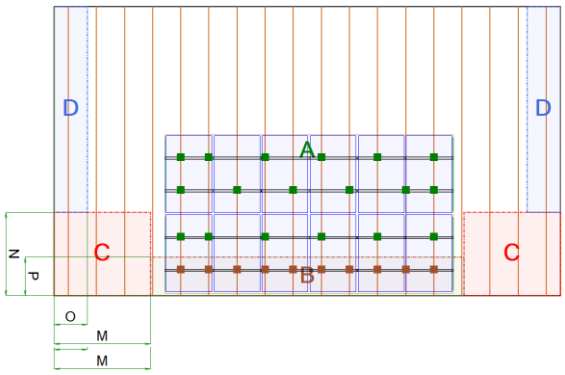


M = the smaller of the following two dimensions: L/4 or H/2
N = the smaller of the following two dimensions: l/4 or H/2
O = the smaller of the following two dimensions: l/10 or H/5
P = the smaller of the following two dimensions: L/10 or H/5

cf5 A complete / B complete

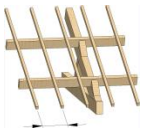
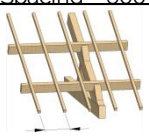
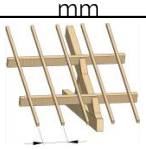


cf4 A partial / B complete

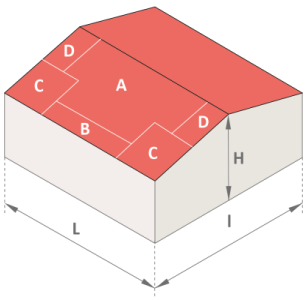


Max. authorised offset between edge of module and the hook

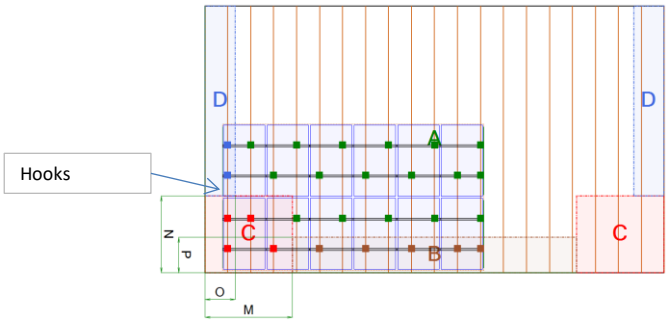
	Zones 1 to 3	Zone 4
Roof Zone C	0,2	0,1

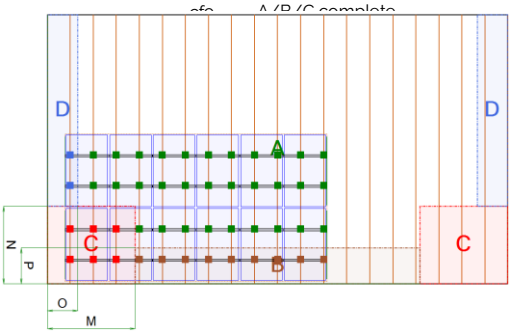
Roof Zone	Rafter or truss spacing	Snow zone	Wind Zone 1			Wind Zone 2		Wind Zone 3			Wind Zone 4	
			Reference diagram / Altitude (m)			Reference diagram / Altitude		Reference diagram / Altitude			Reference diagram / Altitude	
			≤ 200	≤ 500	≤ 900	≤ 500	≤ 900	≤ 200	≤ 500	≤ 900	≤ 500	≤ 900
Main field C	 Spacing ≤ 600 mm	A1	cf8			cf10		cf11			cf9	
		A2										
		B1										
		B2						cf11				
		C1	cf8			cf10	cf10					
		C2						cf11		cf11		
		D					cf9			cf9		
		E	cf8		cf9							
	 600 mm > Spacing ≤ 900 mm	A1	cf10		cf10	cf11	cf11	cf9			cf9	
		A2			cf9		cf9					
		B1										
		B2						cf9				
		C1	cf10		cf10	cf11	cf11					
		C2			cf9	cf11		cf9				
		D				cf9	cf9					
		E	cf10		cf9							
	 900 mm > Spacing ≤ 1200 mm	A1	cf9			cf5						
		A2										
		B1										
		B2										
		C1	cf9			cf5	cf5					
		C2										
		D										
		E	cf9									

Non-existent combination
Excessive loads

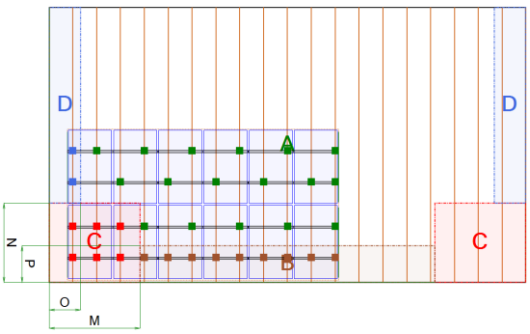


cf8 C partial/A partial/B partial

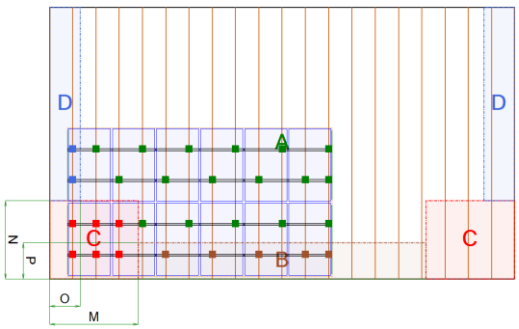




cf11 C complete / B complete / A partial

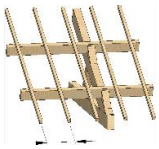
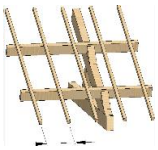
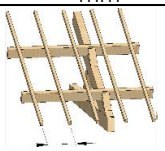


cf10 C complete/A partial/ B partial



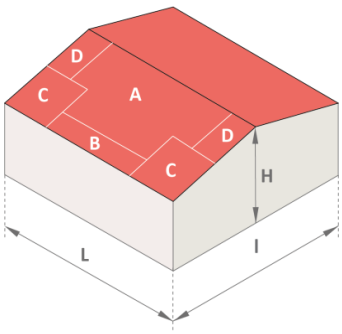
Max. authorised offset between edge of module and the hook

	Zones 1 to 3	Zone 4
Roof Zone D	0,3	0,2

Roof Zone	Rafter or truss spacing	Snow zone	Wind Zone 1 Reference diagram / Altitude (m) ≤ 200	Wind Zone 1 ≤ 500	Wind Zone 1 ≤ 900	Wind Zone 2 Reference diagram / Altitude ≤ 500	Wind Zone 2 ≤ 900	Wind Zone 3 Reference diagram / Altitude ≤ 200	Wind Zone 3 ≤ 500	Wind Zone 3 ≤ 900	Wind Zone 4 Reference diagram / Altitude ≤ 500	Wind Zone 4 ≤ 900
Main field D	 Spacing ≤ 600 mm	A1	cf6			cf6		cf6				
		A2									cf7	
		B1										
		B2						cf6				
		C1	cf6			cf6	cf6					
		C2						cf6		cf6		
		D					cf7			cf7		
		E	cf6		cf7							
	 600 mm > Spacing ≤ 900 mm	A1	cf6			cf6	cf6	cf7				
		A2					cf7					
		B1										
		B2						cf7				
		C1	cf6		cf6	cf6	cf6					
		C2			cf7			cf7				
		D				cf7	cf7					
		E	cf6	cf7								
	 900 mm > Spacing ≤ 1200 mm	A1	cf7									
		A2										
		B1										
		B2										
		C1	cf7									
		C2										
		D										
		E	cf7									

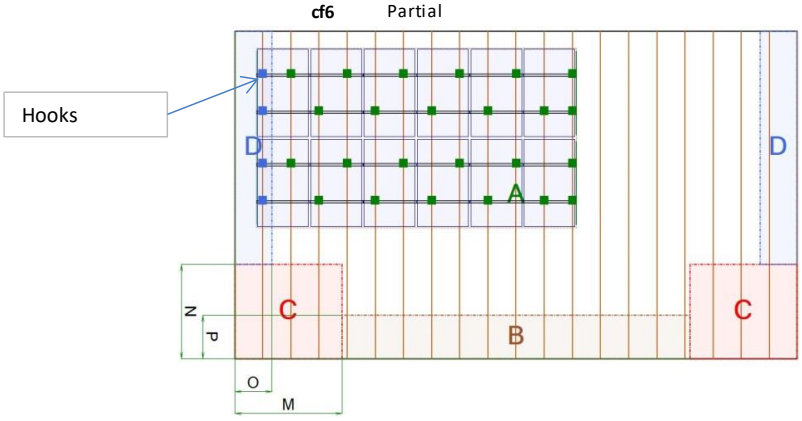
Non-existent combination

Excessive loads

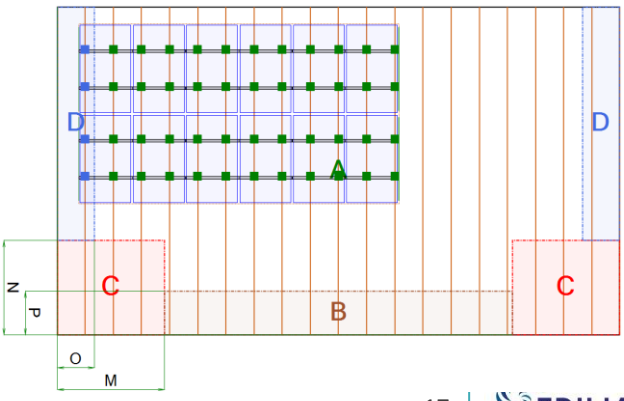


M = the smaller of the following two dimensions: L/4 or H/2
N = the smaller of the following two dimensions: l/4 or H/2
O = the smaller of the following two dimensions: l/10 or H/5
P = the smaller of the following two dimensions: L/10 or H/5

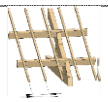
cf6 Partial



cf7 Complete



5.2) IN LANDSCAPE MODE



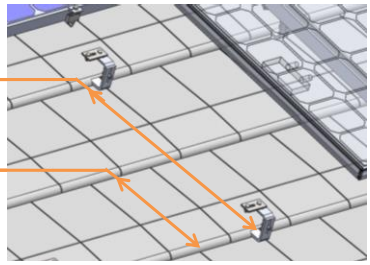
Rafter or truss spacing <900 mm

Tile margin = 250 mm

number of margins	1	2	3	4	5	6
Distance between hooks	250	500	750	###	###	###

Tile margin = 370 mm

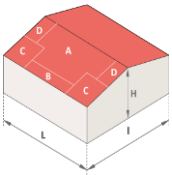
number of margins	1	2	3	4
Distance between hooks	370	740	1110	###



non-existent combination

No "X" hooks according to roof zone

Roof Zone →	Snow zone	Wind Zone 1								Wind Zone 2								Wind Zone 3								Wind Zone 4			
		Altitude ≤ 500 m				500 m < Altitude ≤ 900 m				Altitude ≤ 500 m				500 m < Altitude ≤ 900 m				Altitude ≤ 500 m				500 m < Altitude ≤ 900 m				Altitude ≤ 900 m			
		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
250 mm Margin (Gauge of small tiles)	A1	###	###	1000		###	###	1000		###	###	###	750	###	1000		750	1000	750	500		1000	750	500		###	750	500	
	A2					###																							
	B1																	1000	750	500		1000	750	500					
	B2																												
	C1	###	###	1000		###	###	1000		###	###	###	750	###	1000		750	1000	750	500		1000	750	500					
	C2					1000								1000															
	D																												
	E	###	###	1000		750																							
370 mm Margin (Gauge of large tiles)	A1	###	1110	740		###	1110	740		1110	1110	740	740	1110	1110	740	740	1110	740			1110	740				500	250	
	A2					1110																							
	B1																	1110	740			1110	740						
	B2																												
	C1	###	1110	740		###	1110	740		1110	1110	740	740	1110	1110	740	740	1110	740			1110	740						
	C2					1110								740															
	D																												
	E	###	1110	740		740																							
Max allowable gauge between hooks	A1	###	1741	###	###	###	1741	###	###	###	###	1233	###	###	###	1233	###	1452	1247	1051	909	1452	1247	1051	909	1252	###	906	784
	A2					1475	1475							1475															
	B1																	1452	1247	1051	909	###	###	1051	909				
	B2																												
	C1	###	1741	###	###	###	1741	###	###	###	###	1233	###	1110	1110	1233	###	1452	1247	1051	909	###	###	1051	909				
	C2		###			###	###	###	###	###				###	###														
	D									1335	1335			###	###	###	###												
	E	###	1515	###	###	862	862	862	862																				



Definition of Roof Zones

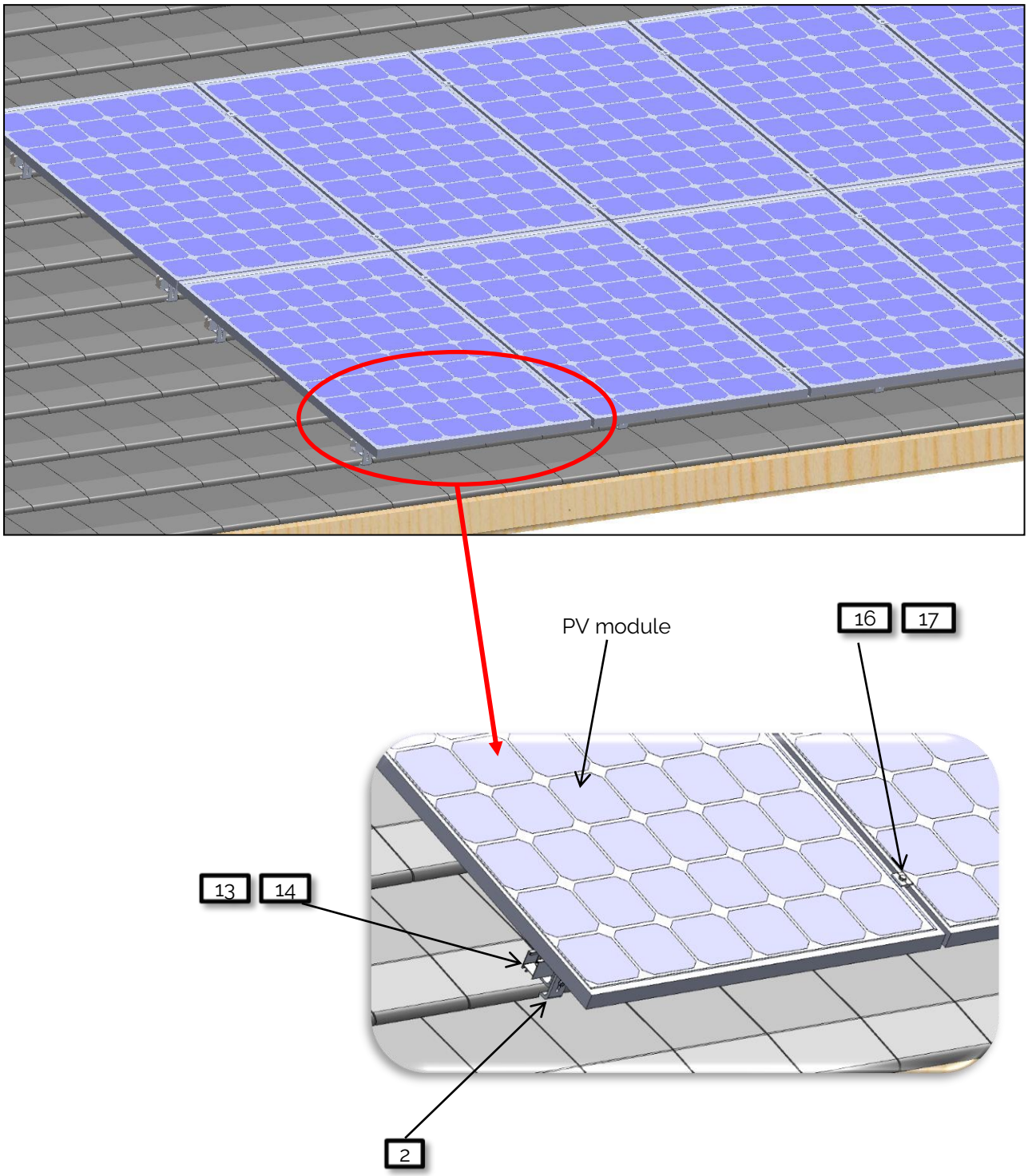
M = the smaller of the following two dimensions: L/4 or H/2
N = the smaller of the following two dimensions: l/4 or H/2
O = the smaller of the following two dimensions: l/10 or H/5
P = the smaller of the following two dimensions: L/10 or H/5

Max. authorised offset between edge of module and the Zones 1 to 3 Zone 4

Roof Zone A (mm)	400	300
Roof Zone B (mm)	300	200
Roof Zone C (mm)	200	100
Roof Zone D (mm)	300	200

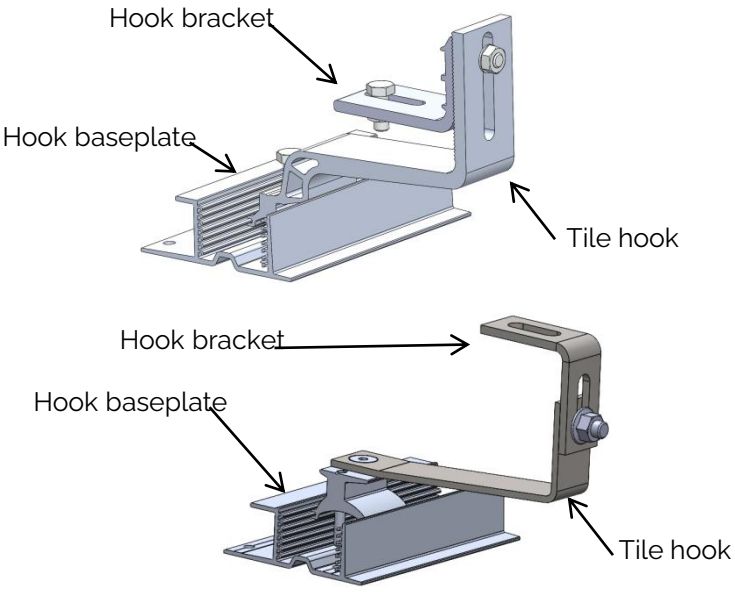
6) Overview of the system on MECHANICAL TILES

PORTRAIT mode

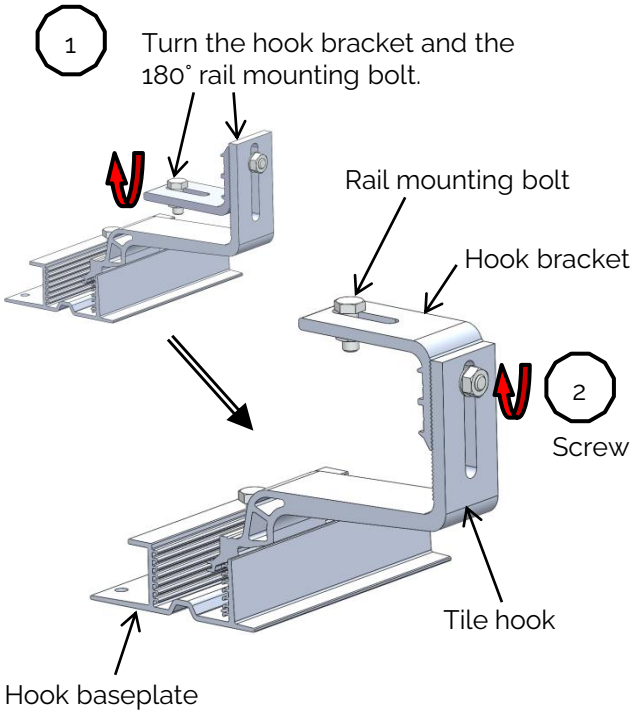


6.1) INSTALLATION ON TRADITIONAL STRUCTURE

6.1.1) Configuration for roofing with FLAT tiles.

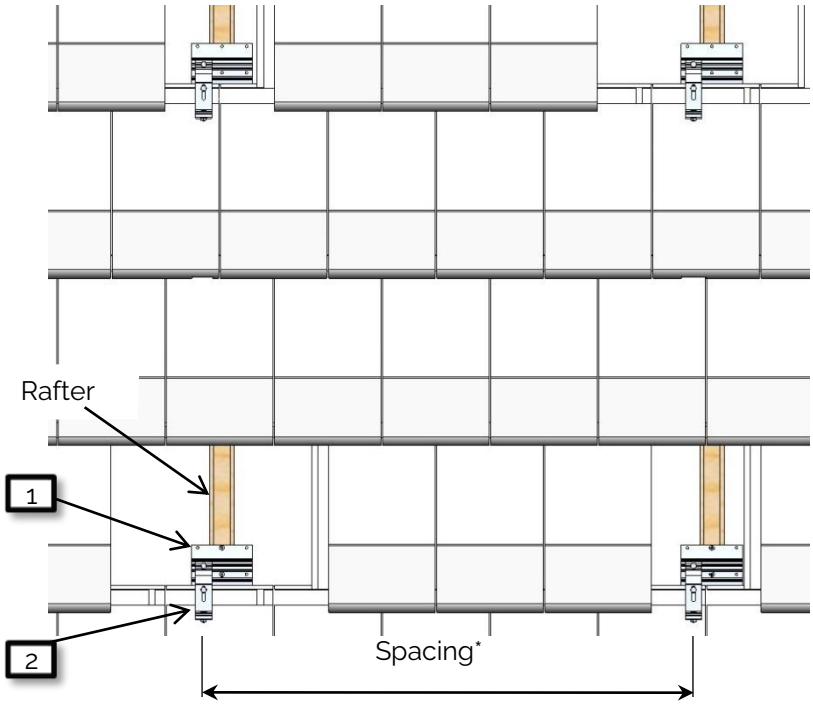


6.1.2) Configuration for roofing with CURVED tiles.

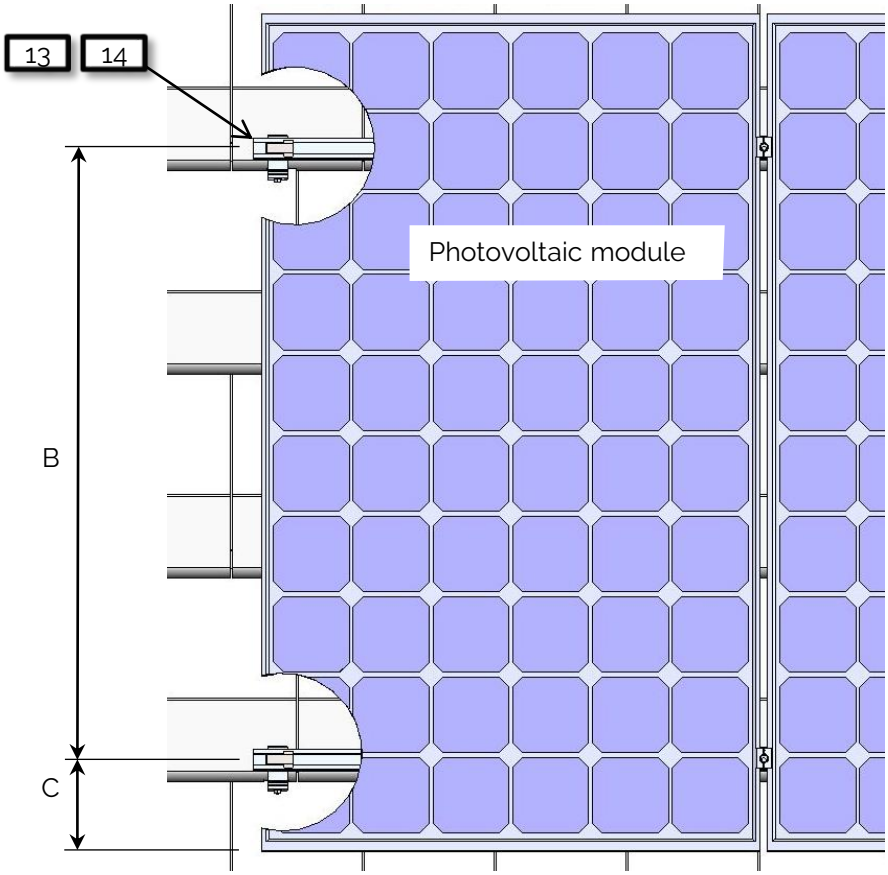


6.1.3) Position of hook baseplates and rails

Remove the tiles for access to the rafters



*: See the design software: MY SOLAR PROJECT. →https://edilians.com/my-solar-project or see "GENERAL CASE WITH MECHANICAL TILES IN PORTRAIT MODE" p. 12 to p.17

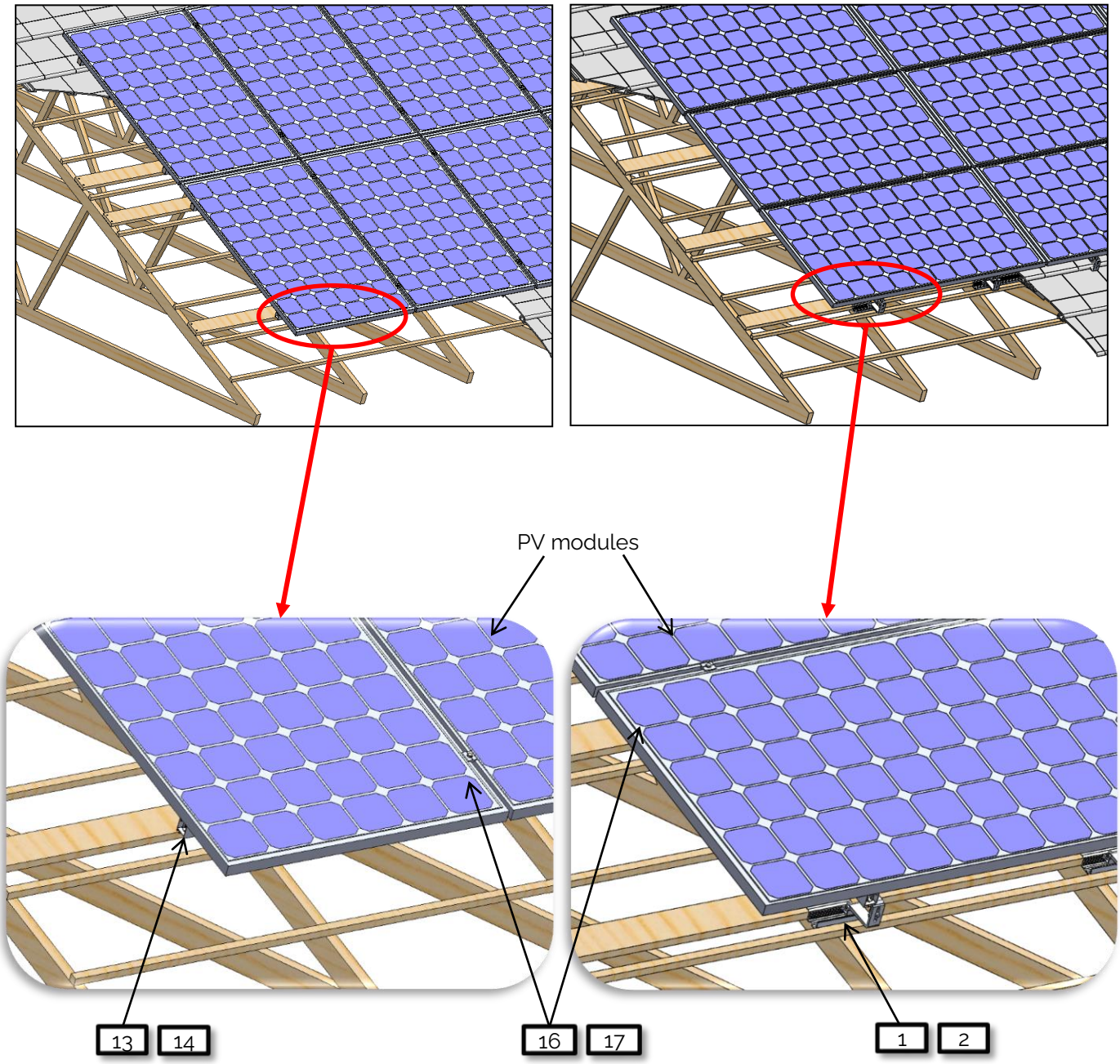


B and C: Refer to the assembly details and manufacturer recommendations for the photovoltaic panels.

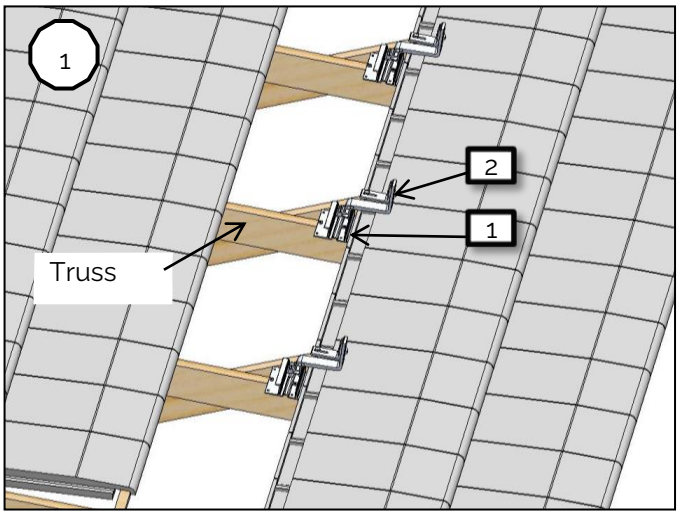
6.2) INSTALLATION ON INDUSTRIAL STRUCTURE (TRUSS)

PORTRAIT mode

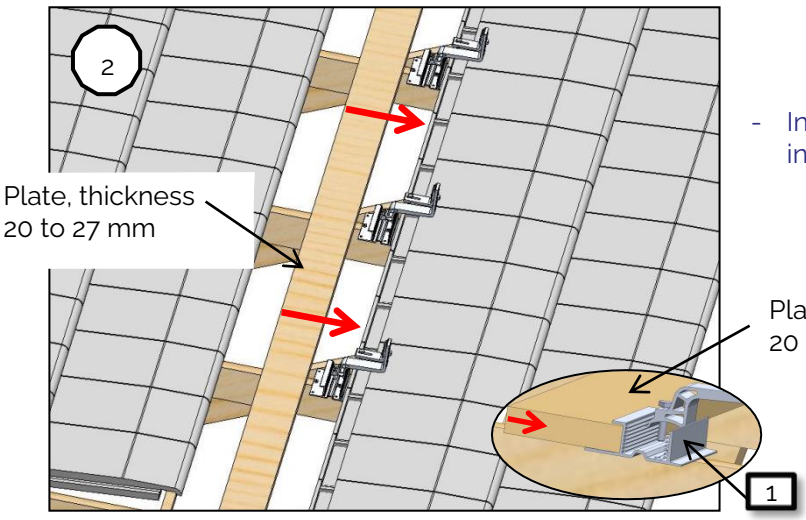
LANDSCAPE mode



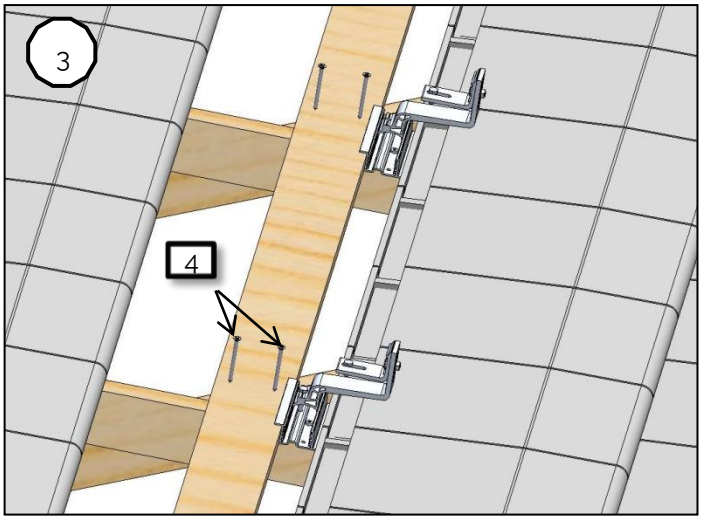
6.2.1) Mounting of baseplates 1 and support plates in PORTRAIT mode.



- Lay the tiles all along the length of the field;
- Secure the hook baseplate 1 to the trusses (see details p.25 "Mounting the baseplate for MECHANICAL TILES on rafters"

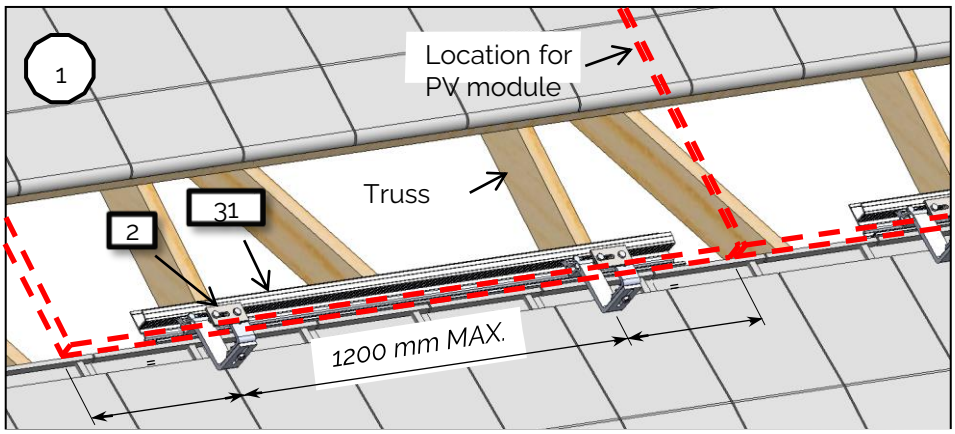


- Insert a 20- to 27-mm thick plate in the hook baseplate 1

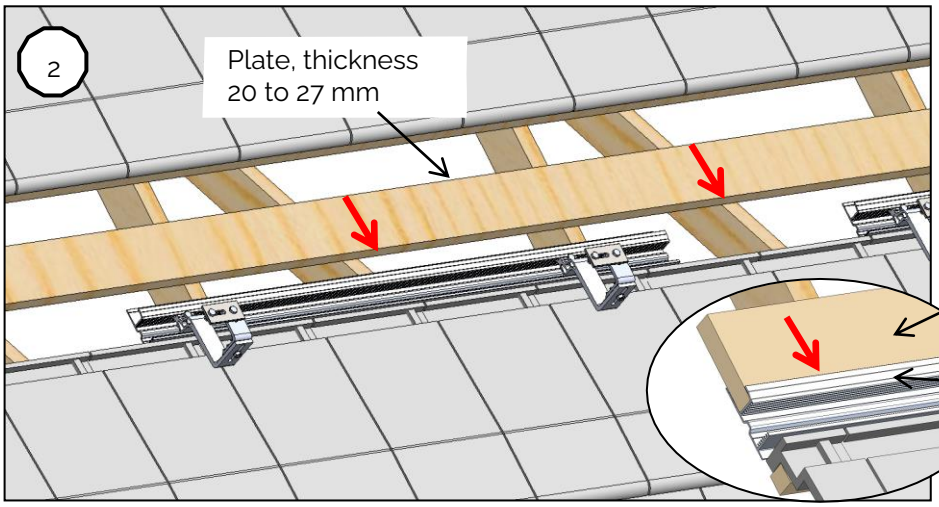


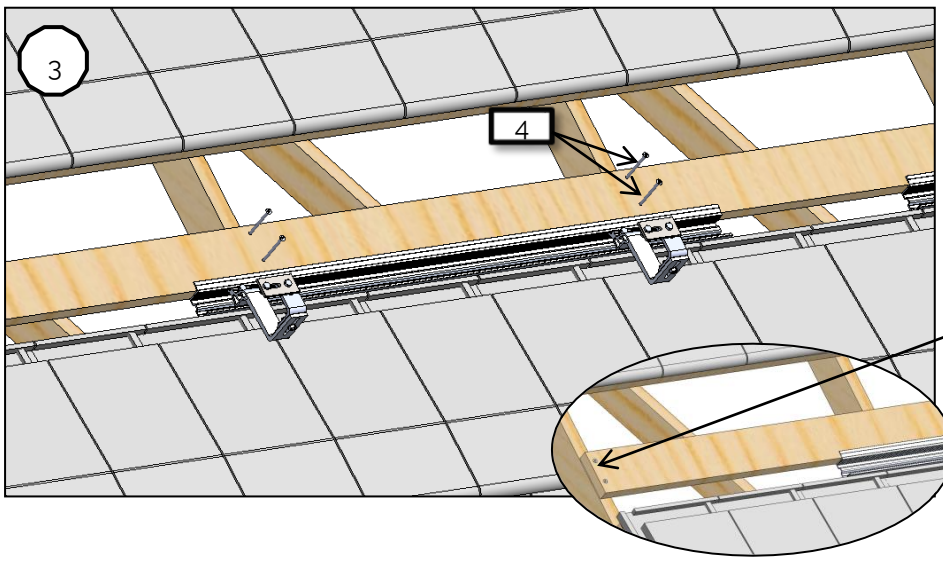
- Mounting the support plate on the trusses 4 using screws.

6.2.2) Mounting of baseplates 30 and support plates in LANDSCAPE mode.



- Lay the tiles all along the length of the field;
- Centre the Hook Baseplate assembly 31 with respect to the PV module;
- Position the hooks 2 a maximum of 1200 mm from each other;
- Drill through the hook baseplates in line with the trusses 31 (Details p.25)
- ecure the hook baseplate assembly 31 to at least two trusses using the 6x70 screw 4 .

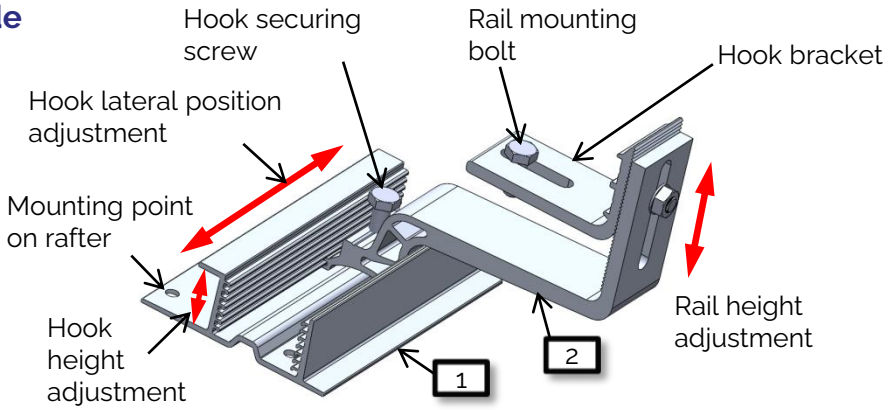




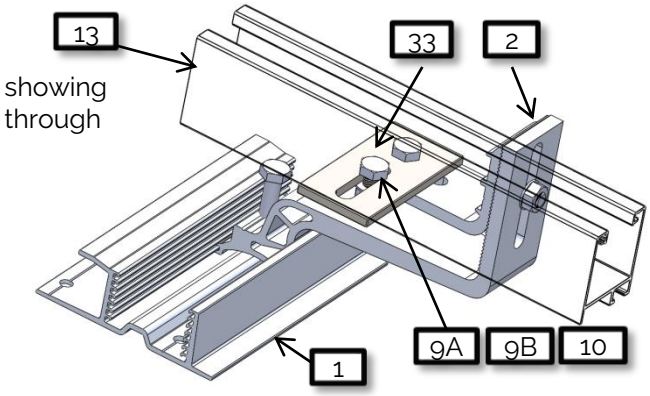
Secure the support plate to the trusses using the screws 4

6.3) Presentation of the hook assembly for MECHANICAL TILES.

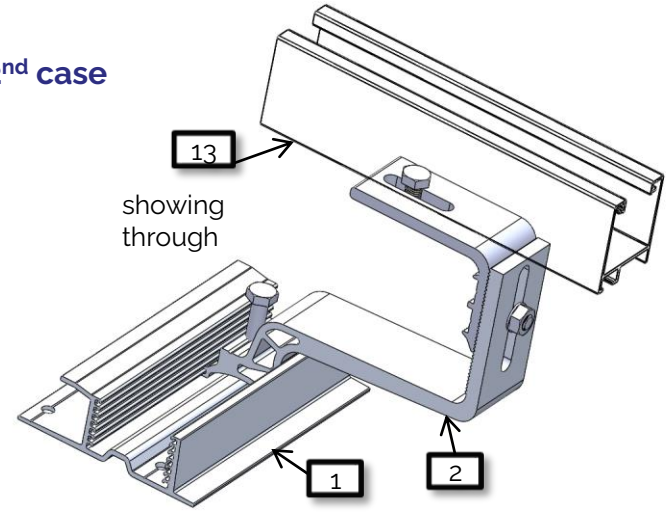
PORTRAIT mode



LANDSCAPE mode: 1st case



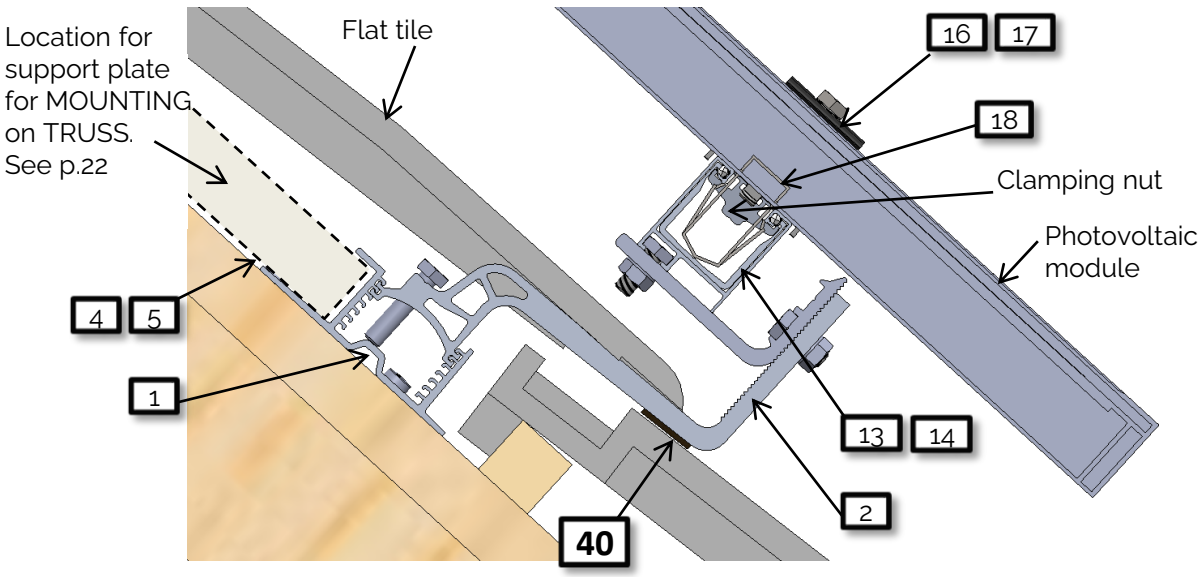
2nd case



- Secure the adapter plate 33 to the hook.
- Secure the rail 13 to the adapter plate 33 using the bolt 9A ou 9B + 10 .

- If the rail height requires the bracket to be turned → see details 6.10 page 29.

6.4) Installation on MECHANICAL TILE roofing

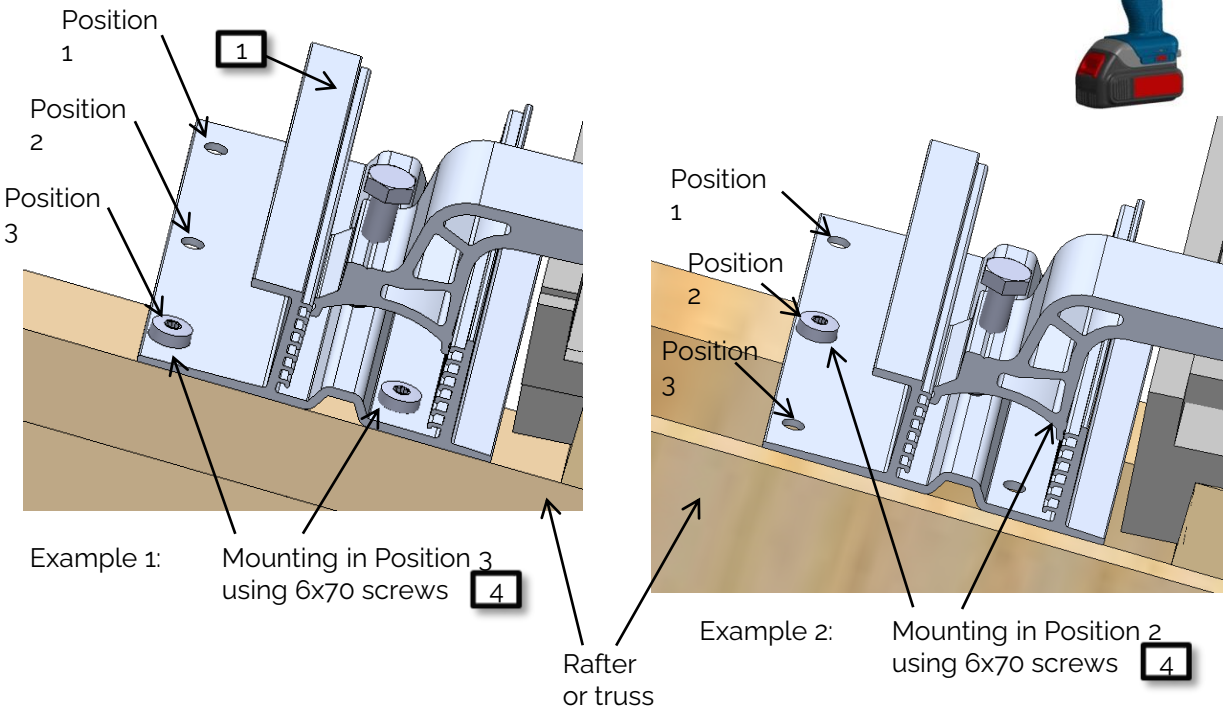


6.5) Mounting the hook baseplate on rafters 1 and for 30 MECHANICAL TILES

PORTRAIT mode

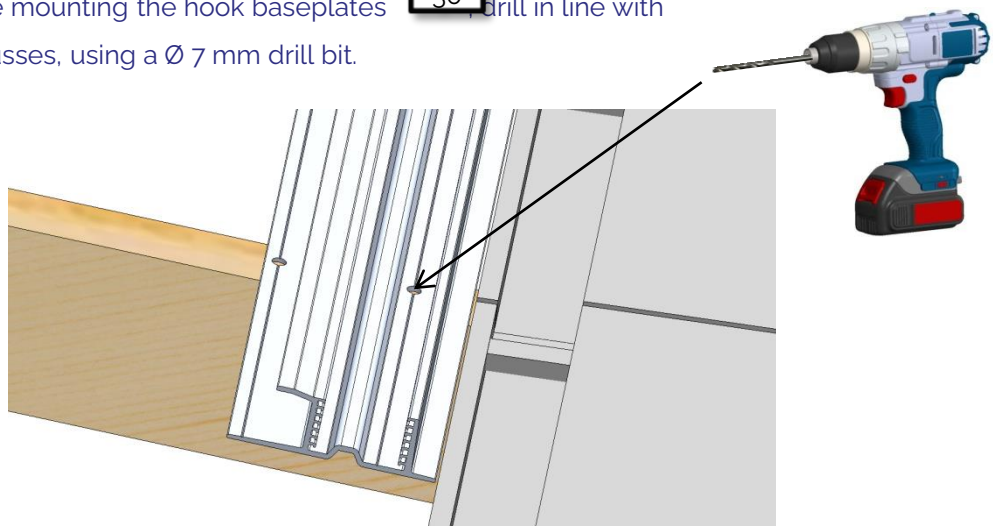
The hook baseplate 1 is secured to the rafter via two mounting points.
Use one of the three available positions.

Example of mounting the hook baseplate on a rafter or truss

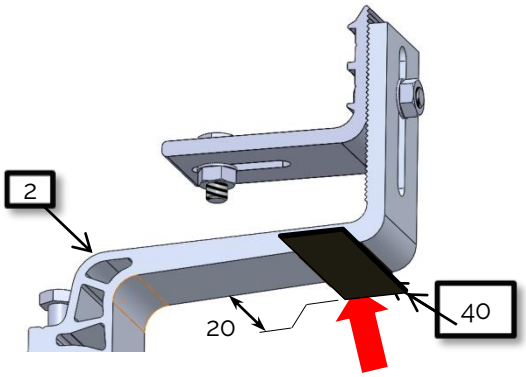


LANDSCAPE mode

Before mounting the hook baseplates 30, drill in line with the trusses, using a Ø 7 mm drill bit.

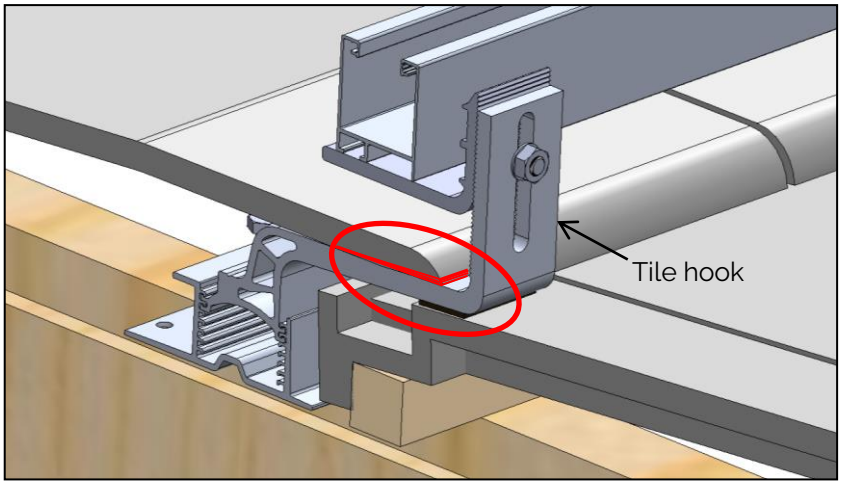


6.6) Protection of MECHANICAL TILES using a SEAL

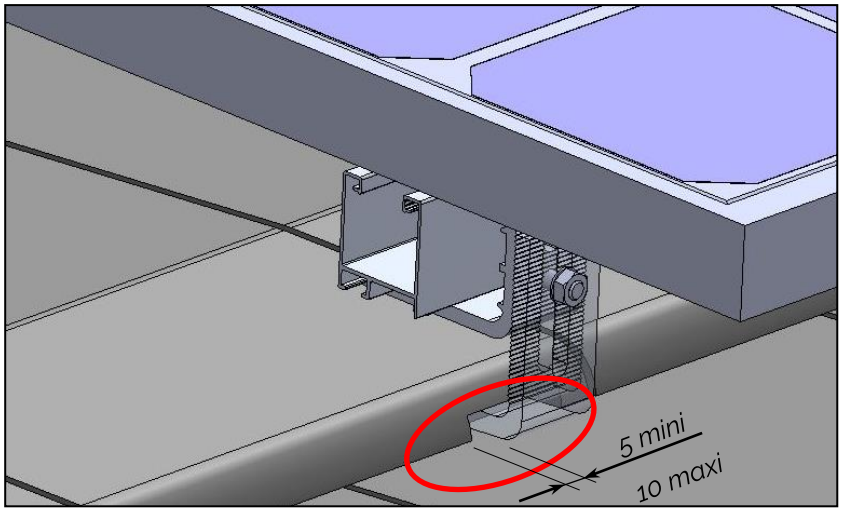


Affix a seal 40
under the hook to protect
the contact with the tiles.
Seal must be extend of 20mm
from each side of the hook.

6.7) Grinding the tile covering the hook



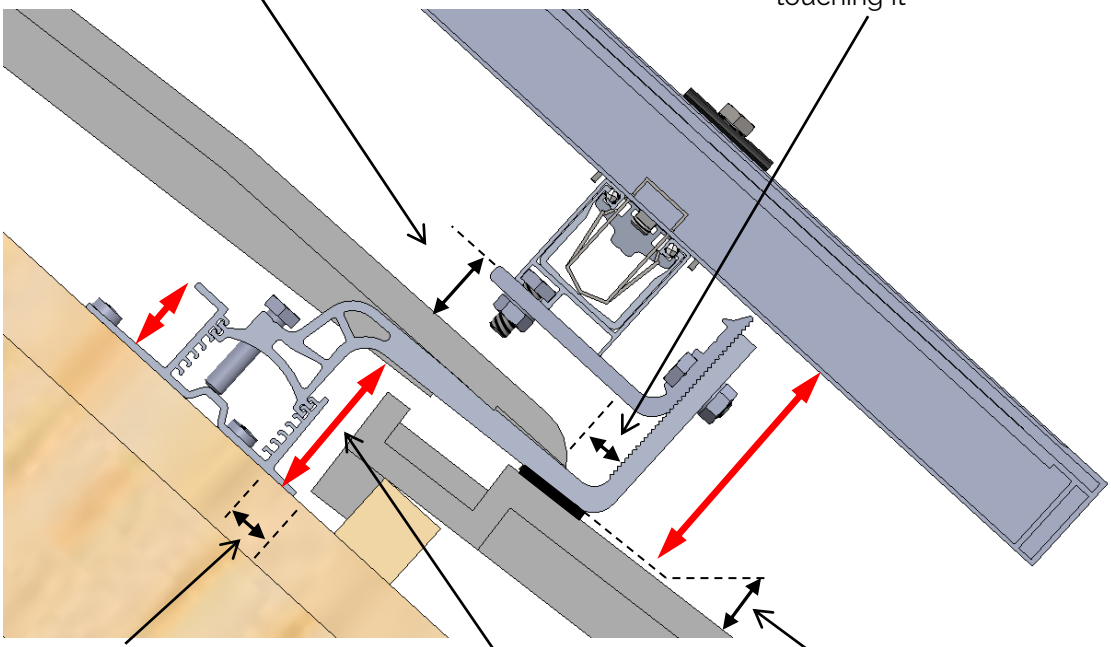
Cross-section view on flat tile.

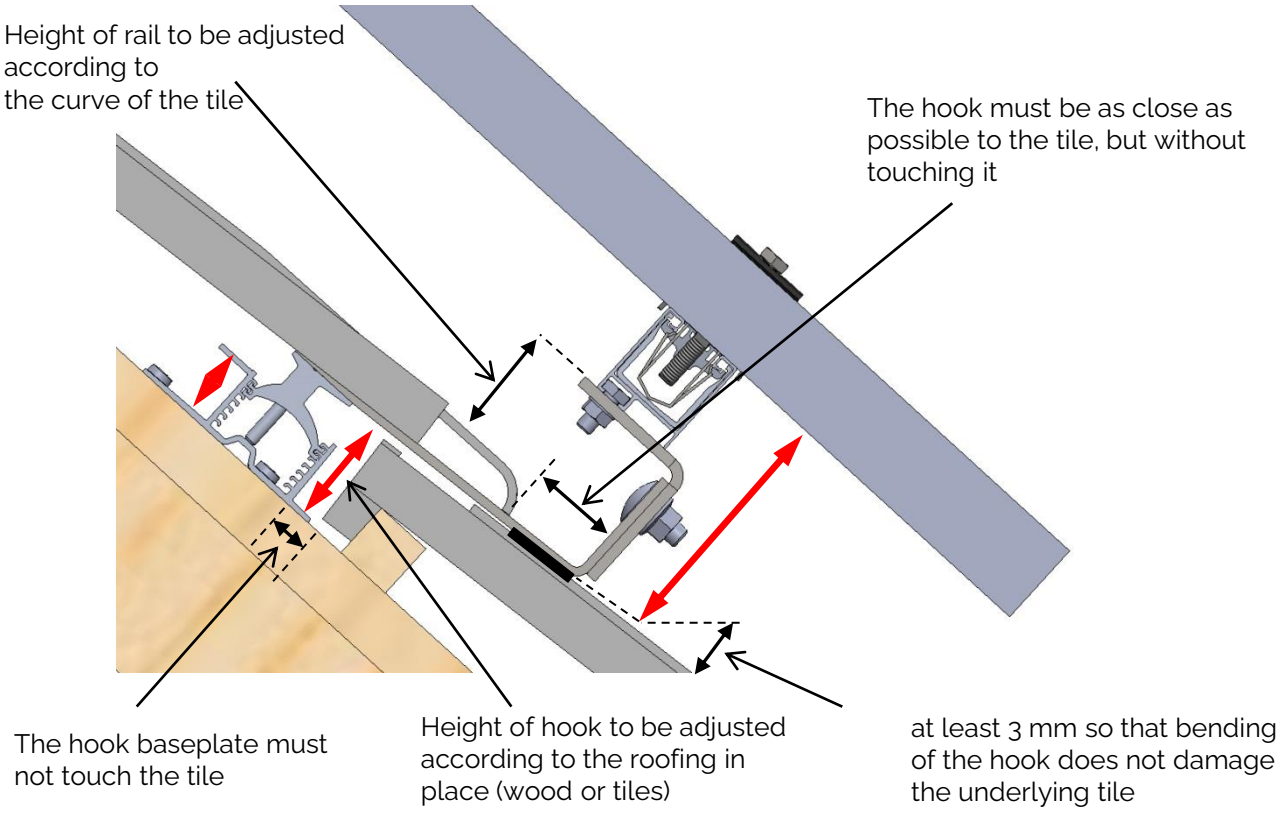


External view (hook showing through)

Grind the tile
from min. 5 mm
to max. 10 mm
on each side
of the hook.

6.8) Constraints for using the TILE hook

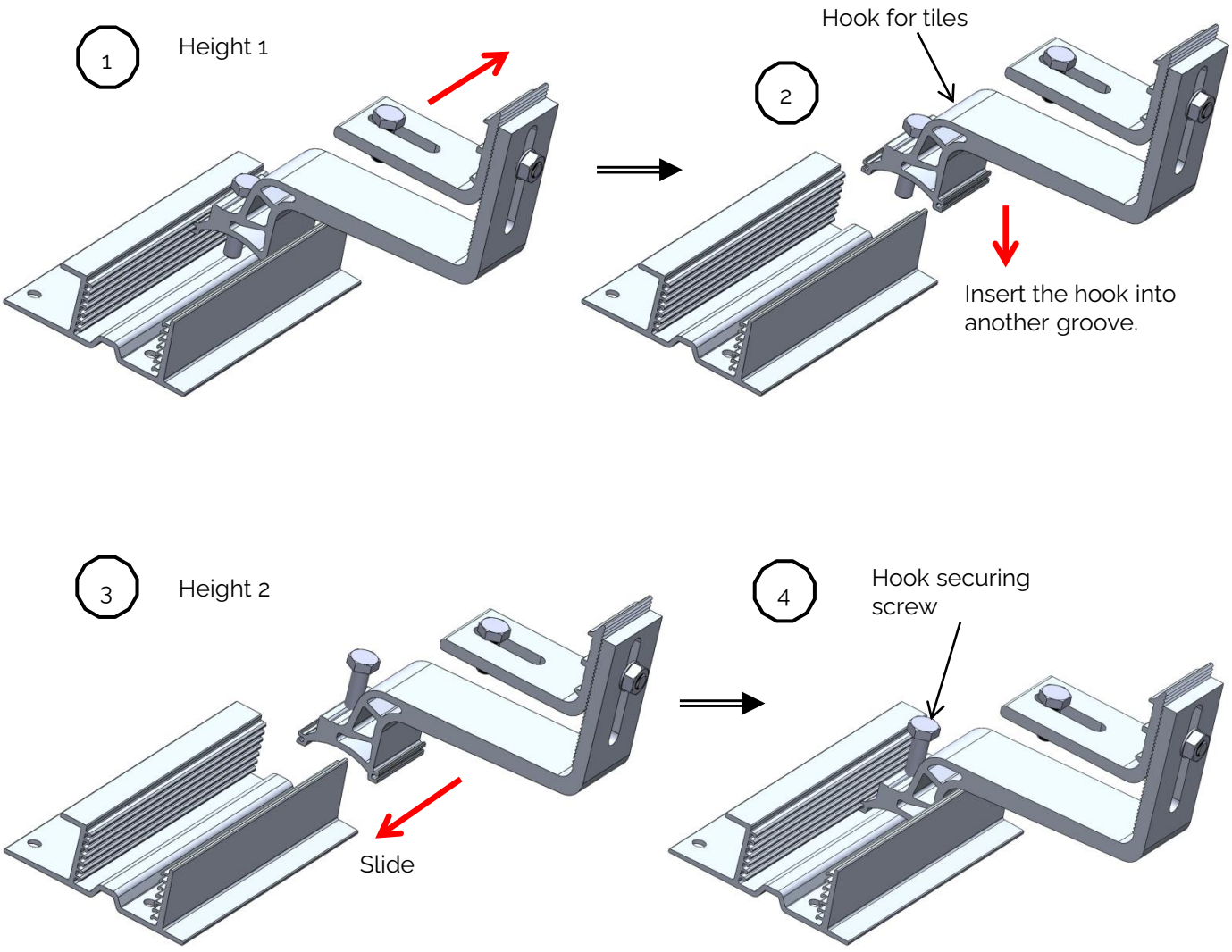




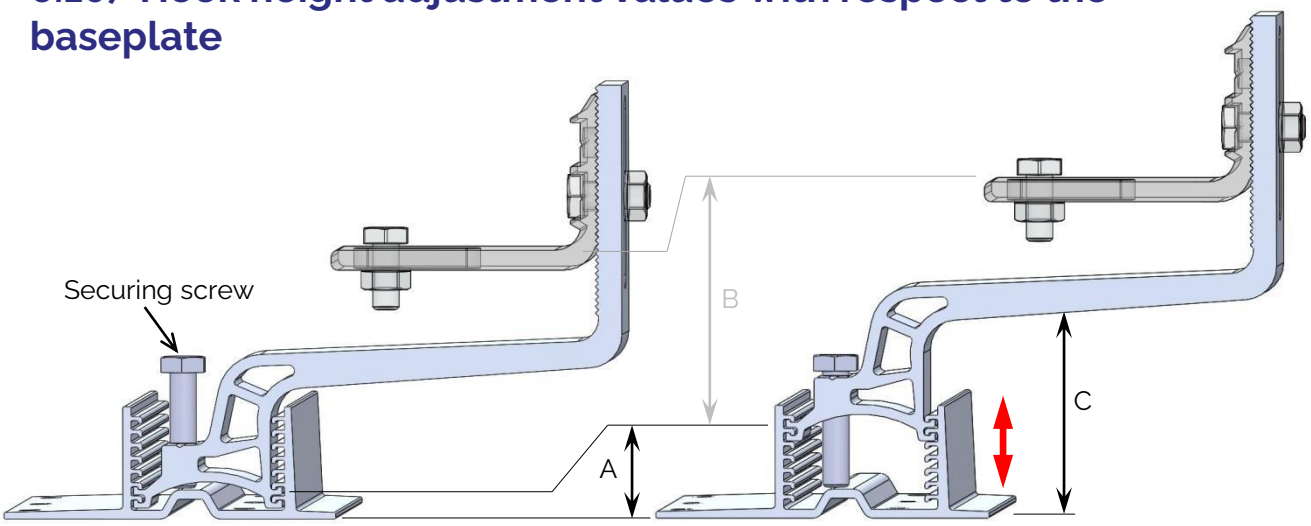
6.9) Hook height adjustment

To modify the height of the hook in the hook baseplate, slide the hook to the end of the guide rail, take it out, and then re-engage it at the desired height in the corresponding guide rail.

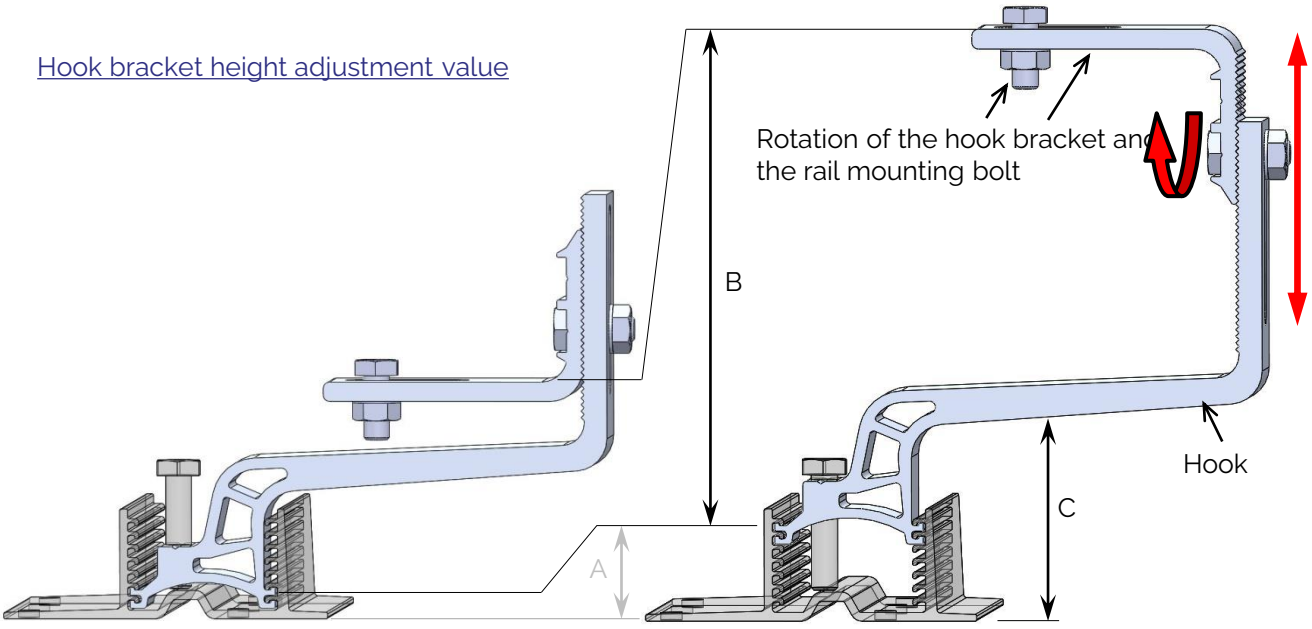
Slide the hook to extract it



6.10) Hook height adjustment values with respect to the baseplate



Hook bracket height adjustment value

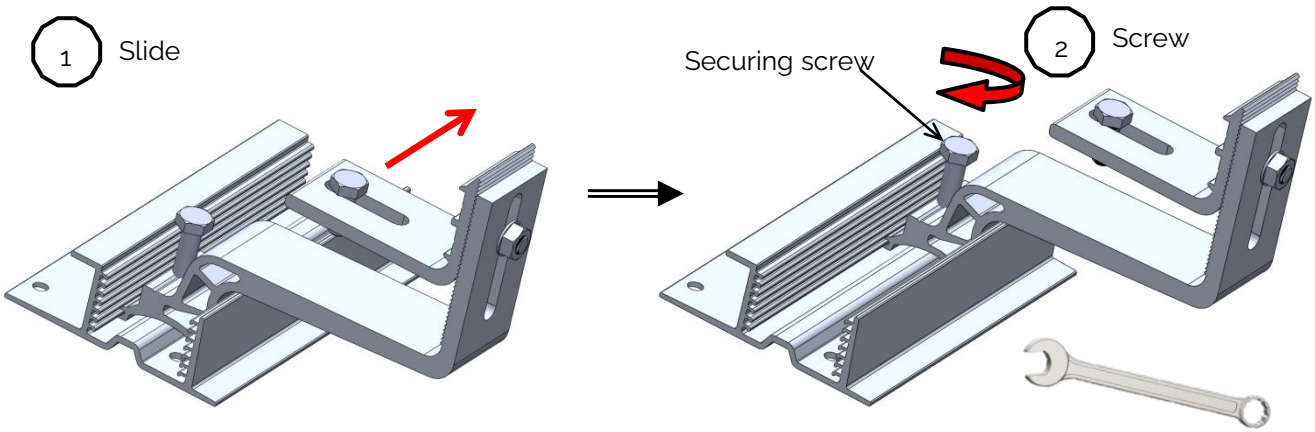


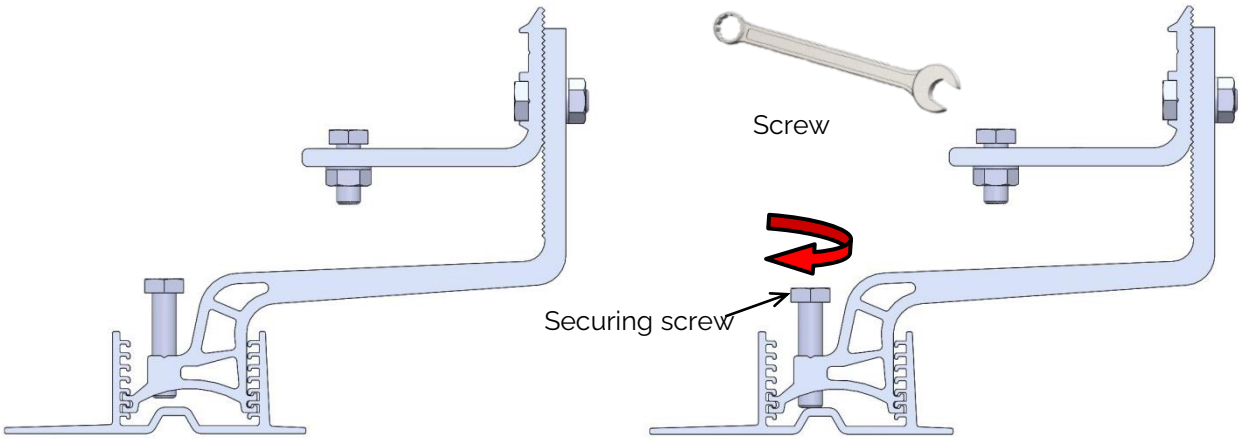
Configuration for roof with CURVED tiles. See page 19

Height	Setting (mm)	Pitch (mm)
A	8 to 28	4
B	65 to 152	2
C	40 to 60	4

6.11) MECHANICAL TILE hook lateral position adjustment

The lateral position of the hook can be adjusted by simply sliding it in the hook baseplate guide rails. It is then secured by tightening the securing screw.
The hook can then be inserted in the roofing at the best location according to the actual position of the tiles.

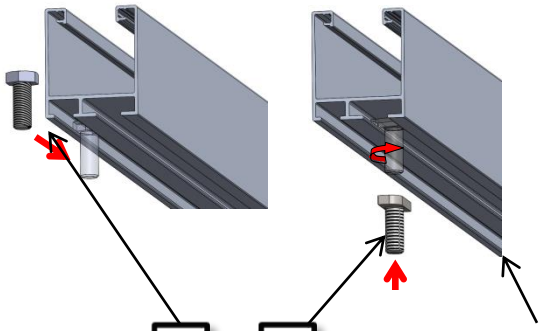




Locking the hook in position on the hook baseplate by tightening the securing screw.

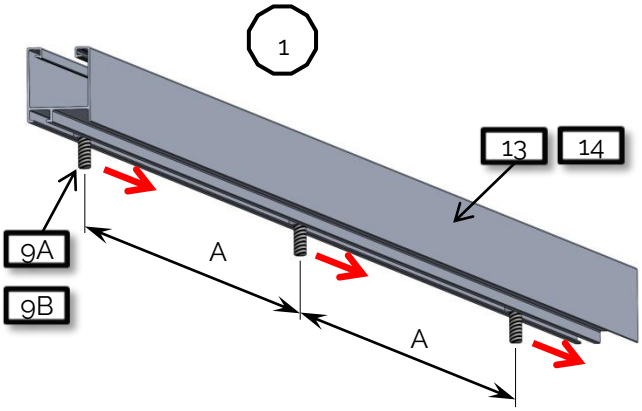
Once the desired position has been reached, tighten the securing screw.
Tightening torque 3 Nm.

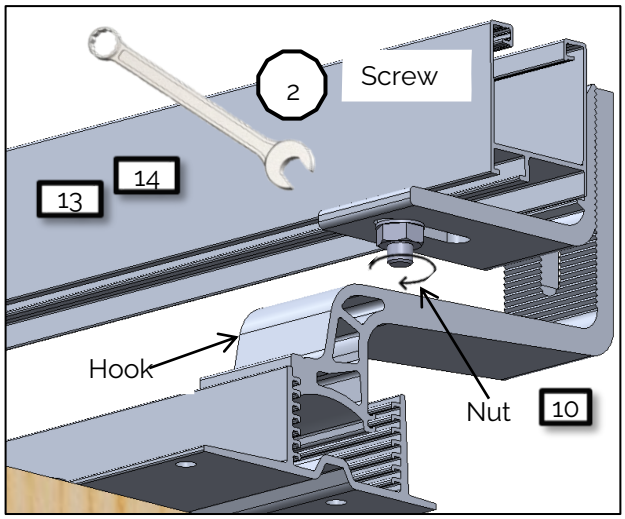
6.12) Positioning the rail on the TILE hook



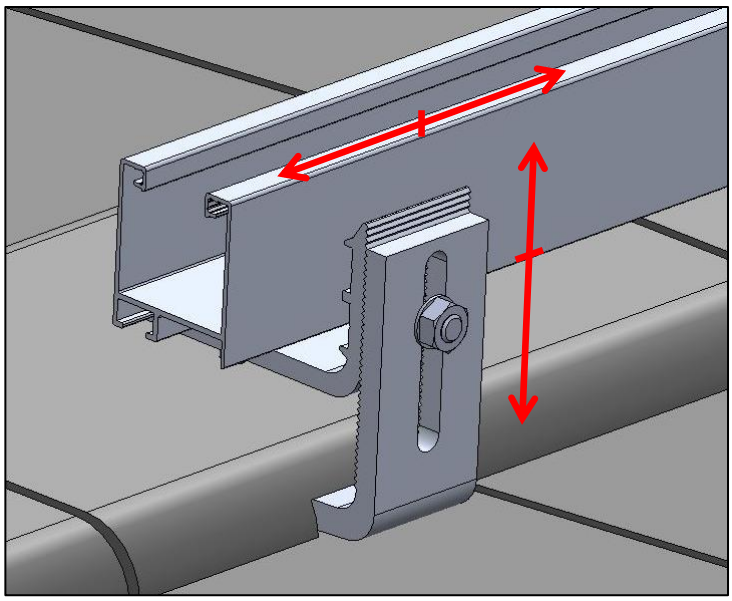
1 Slide the screws 9A or 9B (OPTION) in the rail 13 14 and position them in accordance with rafters
(see p.12 à 17).

2 Engage the screws 9A or 9B (OPTION) that are pre-mounted on the rail in the oblong holes in the hooks and then tighten the nuts 10.



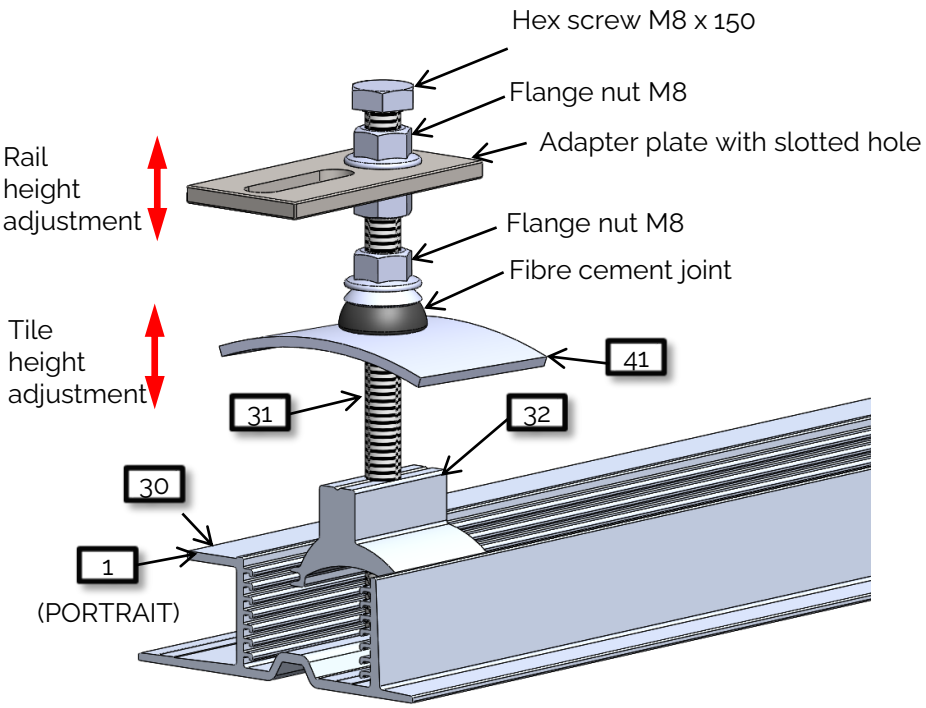


Adjust to desired position. Check that the field is flat.
Tighten the nut on the rail mounting bolt to maintain the desired position
Tightening torque 17.4 Nm.

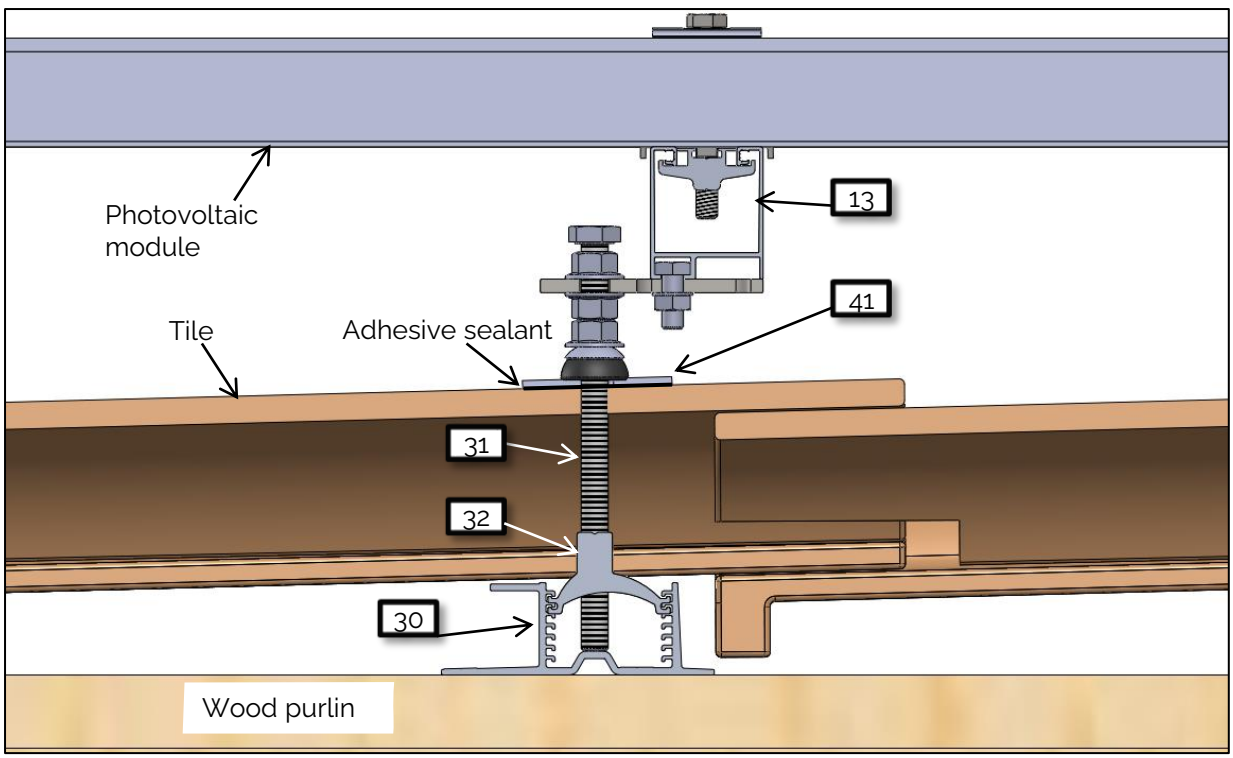


7) Presentation of the screw M10 assembly.

LANDSCAPE Mode
PORTRAIT Mode possible

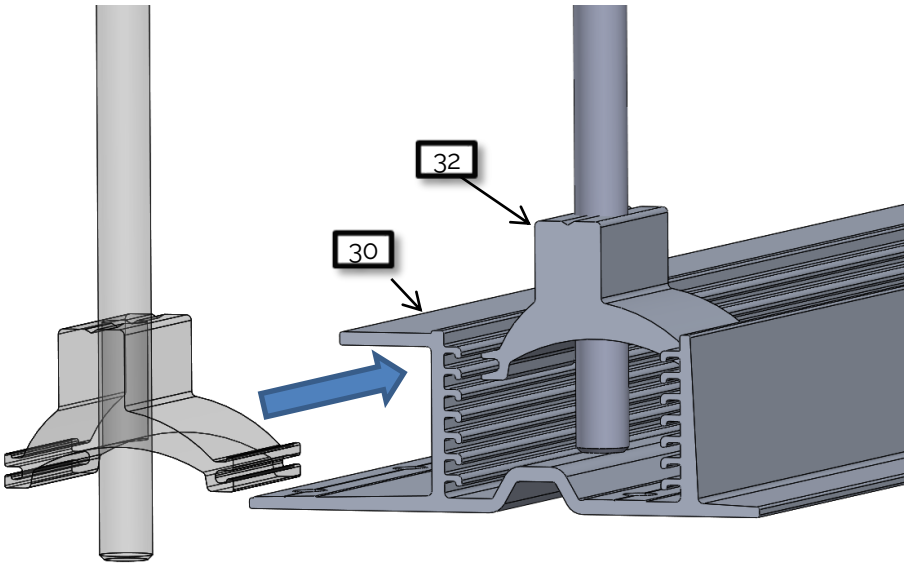


7.1) Installation on MECHANICAL TILE roofing

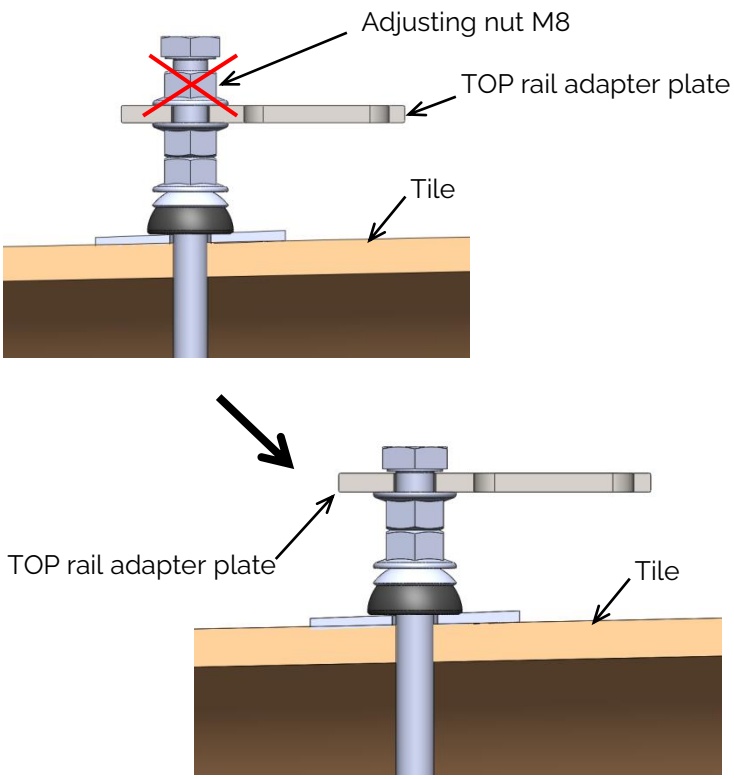


7.2) Preparation of the parts.

Insert TOP screw support M8 32 into TOP hook baseplate ti 30 at the higher position.

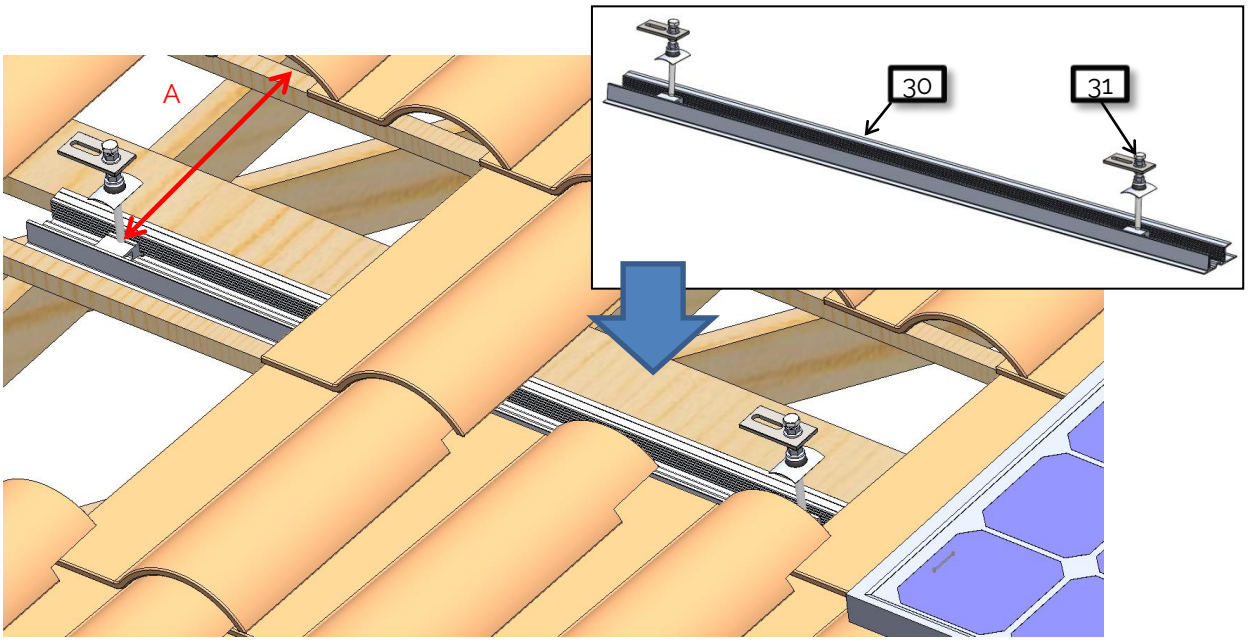


If the tile height requiring, it's possible to make an assembly without the top nut 31 .

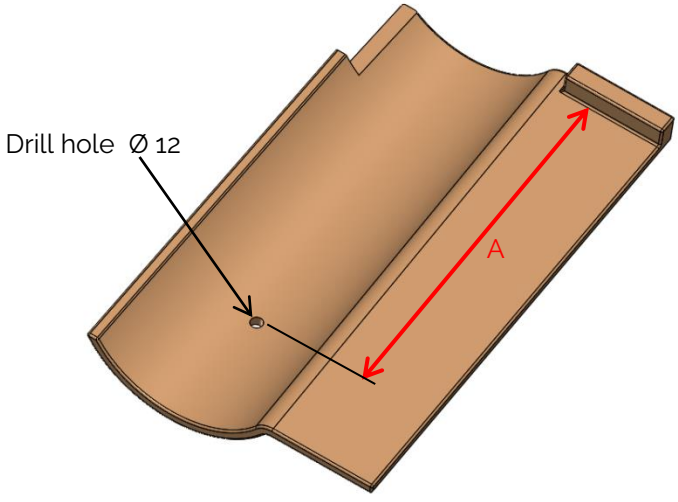


7.3) Drilling of the tiles.

Put on the roof the set TOP baseplate tile 30 ; TOP screw assy M8 31 ; TOP screw 32 support
Measure dimension A.



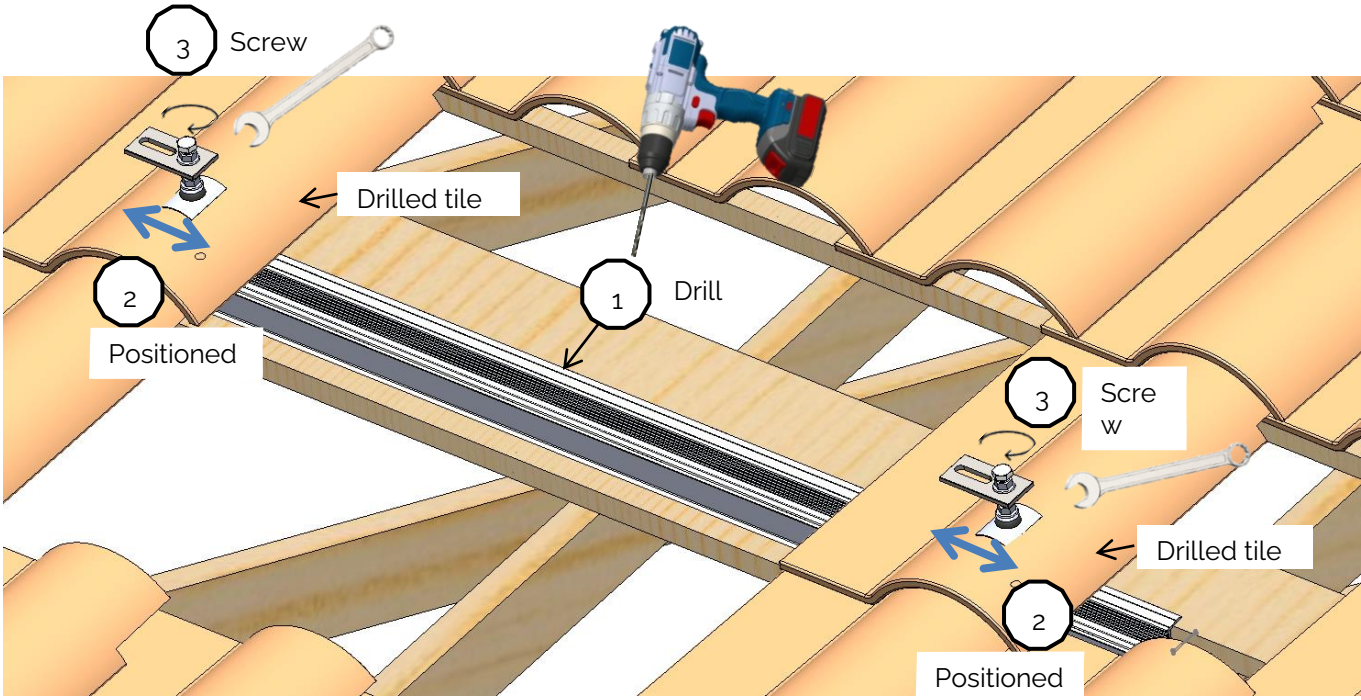
Drill the tile in the inner hollow of the curve by deferring the dimension A.



7.4) Fixing the hook baseplate tile on the frame.

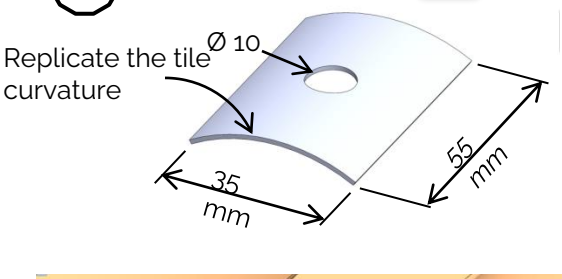
Fix the assembly on the frame

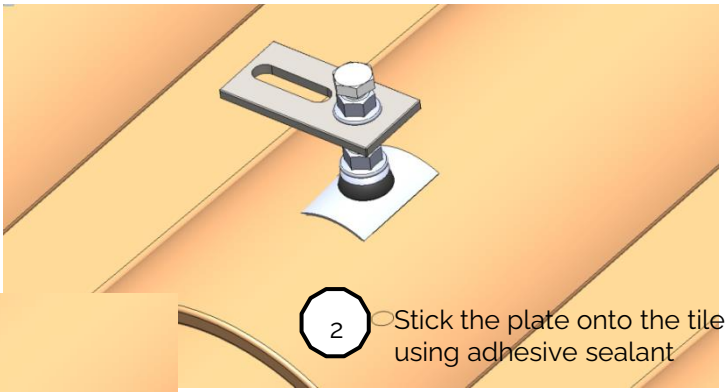
1. Drill and fix the TOP hook baseplate tile 30 on the frame as specified from page 24 to page 26.
2. Put the two drilled tiles above the TOP screws support M8 32
3. Tighten the TOP screw assy M8 31 in the TOP screws support M8 32



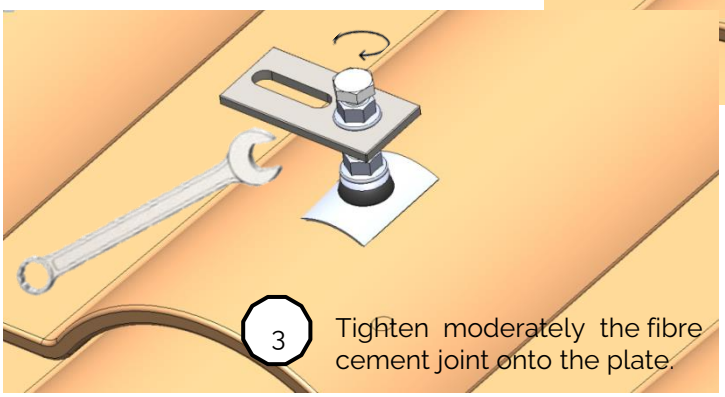
7.5) Tile plate manufacture and fixing

1. Tile plate dimensions 41





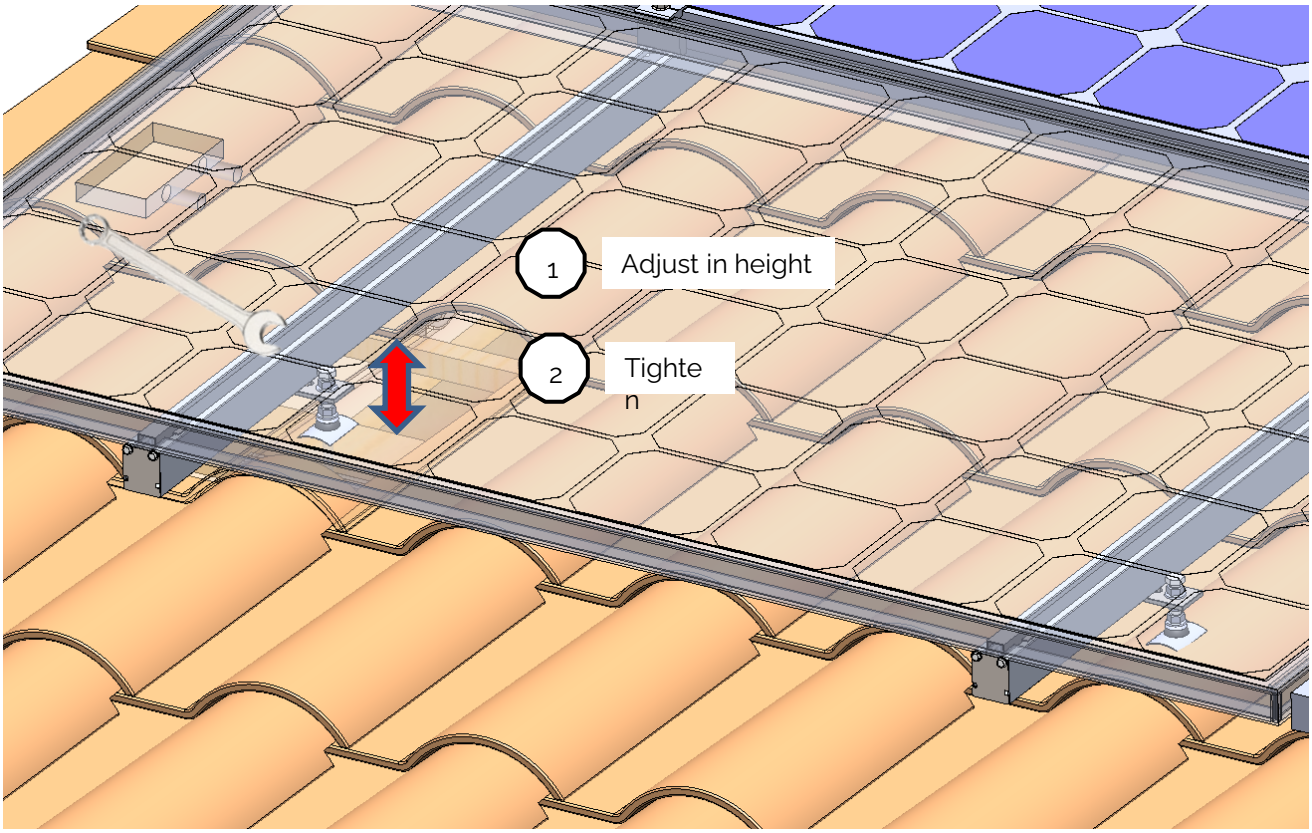
2. Stick the plate onto the tile using adhesive sealant



3. Tighten moderately the fibre cement joint onto the plate.

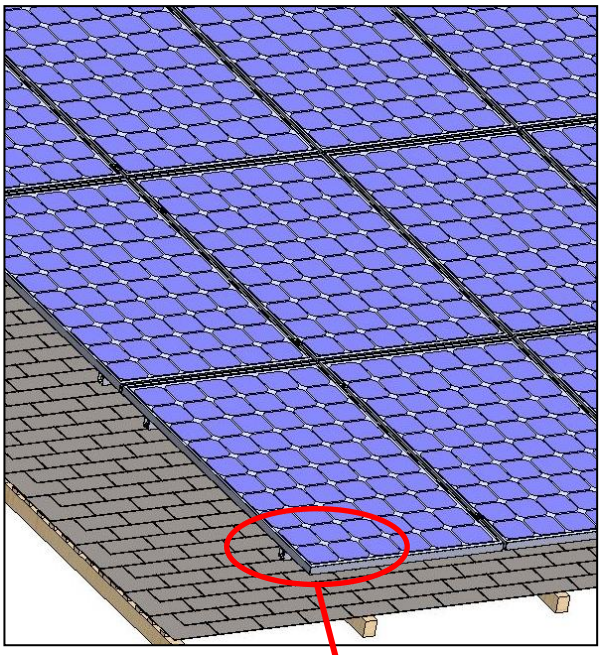
7.6) Installing the rails.

Adjust in height the TOP screw assy M8, tighten them and mont the rails according to indications p.48

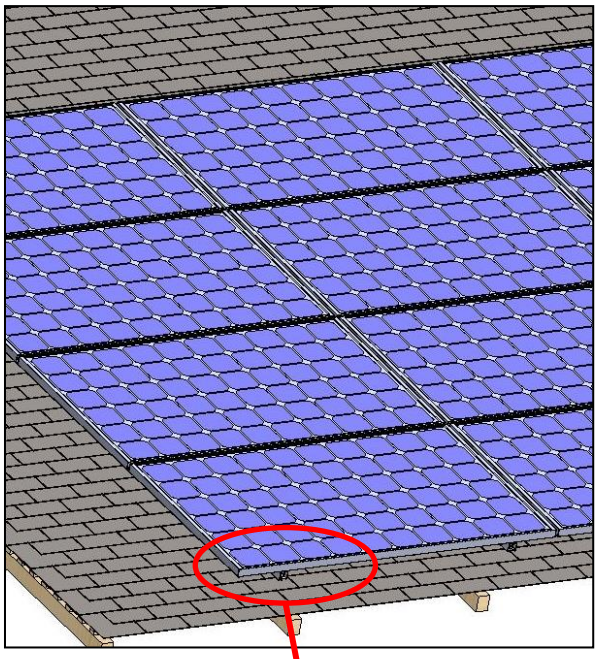


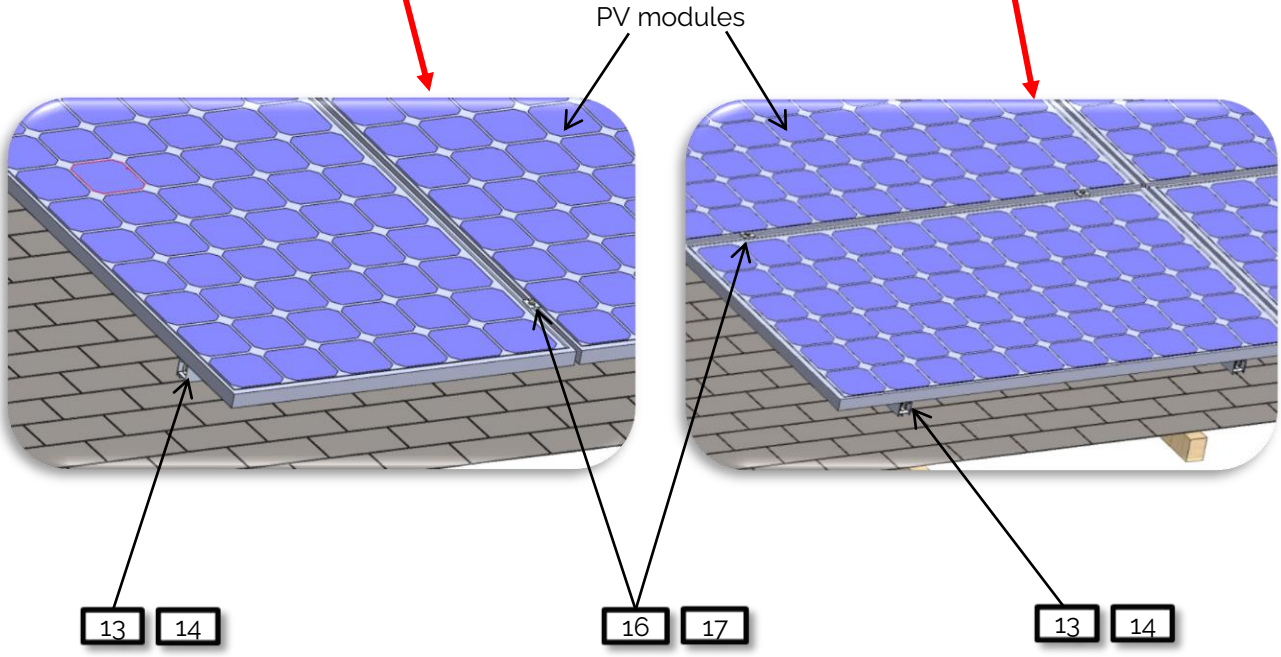
8) Overview of the system on SLATES & FLAT TILES

PORTRAIT mode

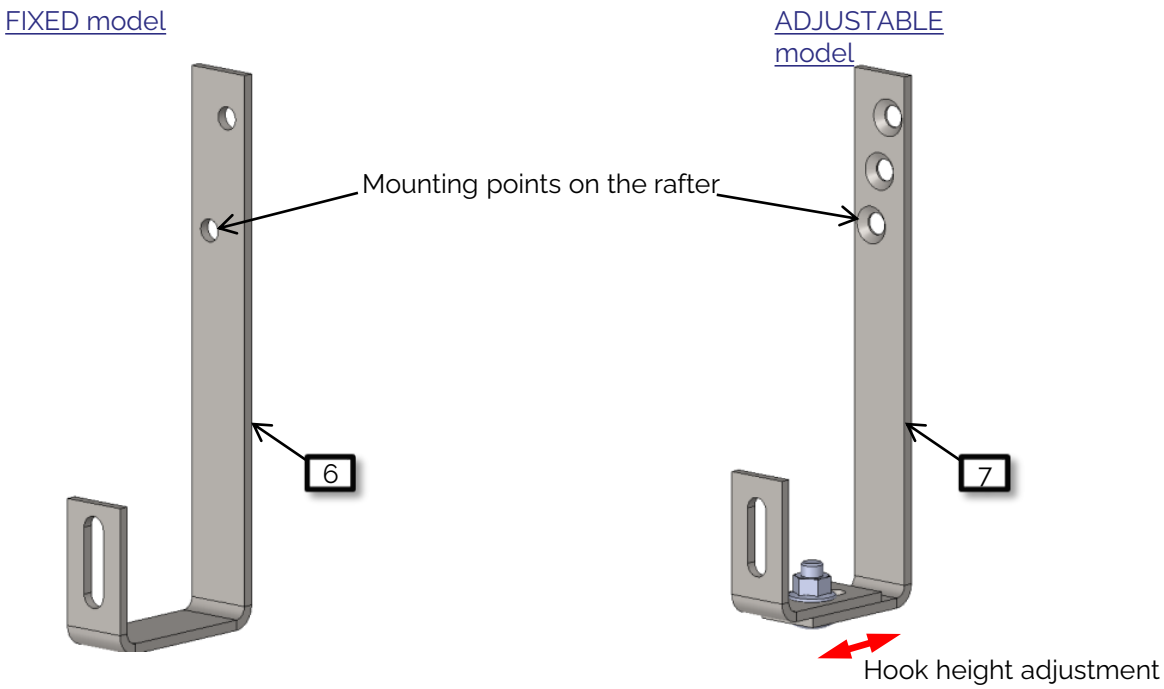


LANDSCAPE mode

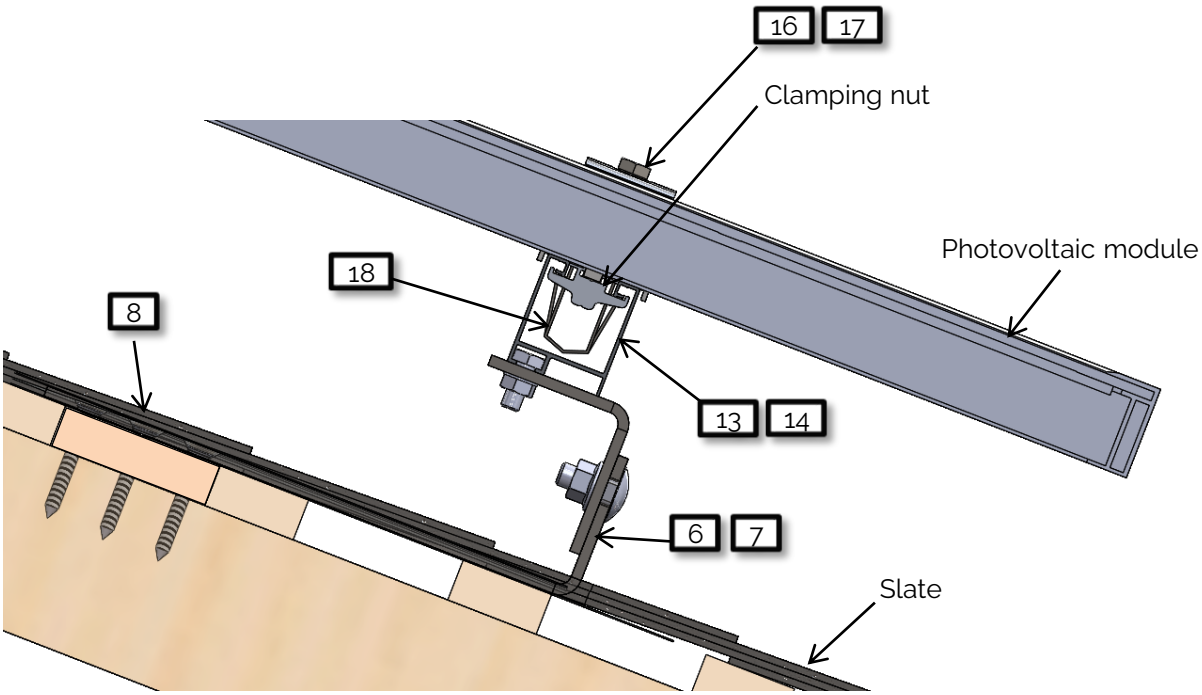




8.1) Presentation of hook models for SLATES & FLAT TILES



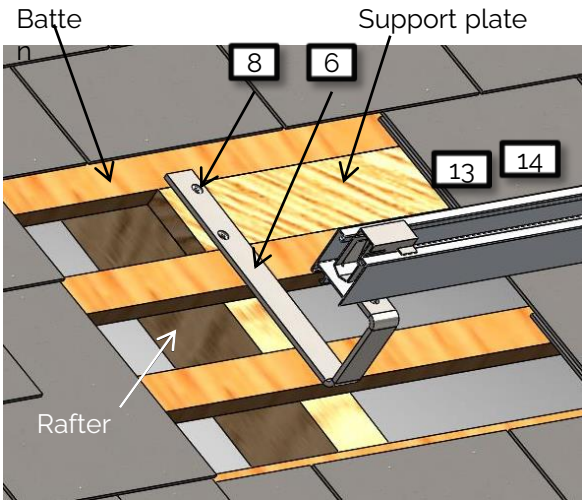
8.2) Installation on SLATES & FLAT TILES



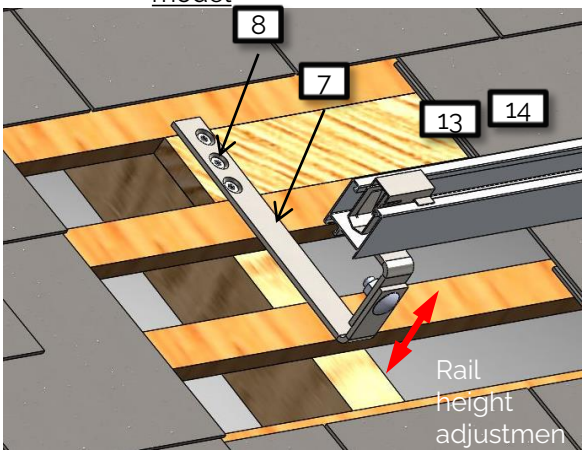
8.2.1) Configuration for laying on BATTENS. (Represented without zinc sheets)

PORTRAIT MODE

FIXED model

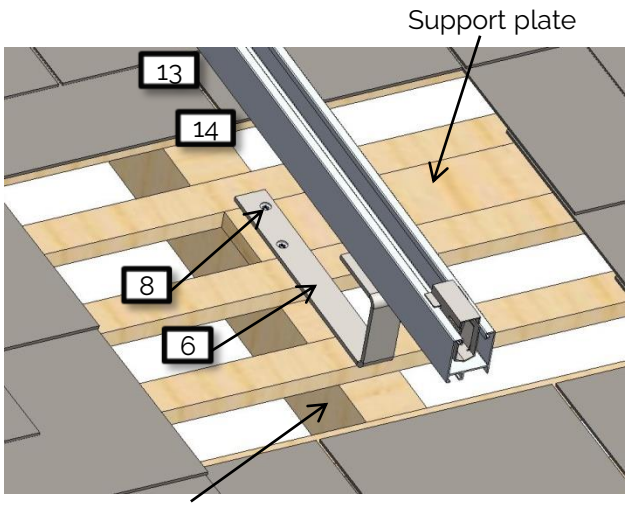


ADJUSTABLE model

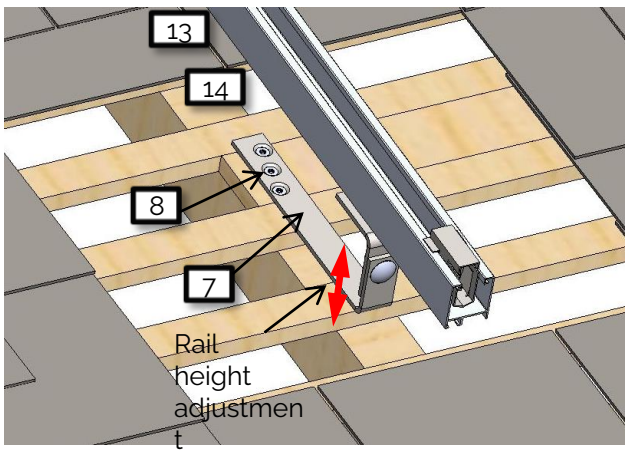


LANDSCAPE MODE

FIXED model



ADJUSTABLE model

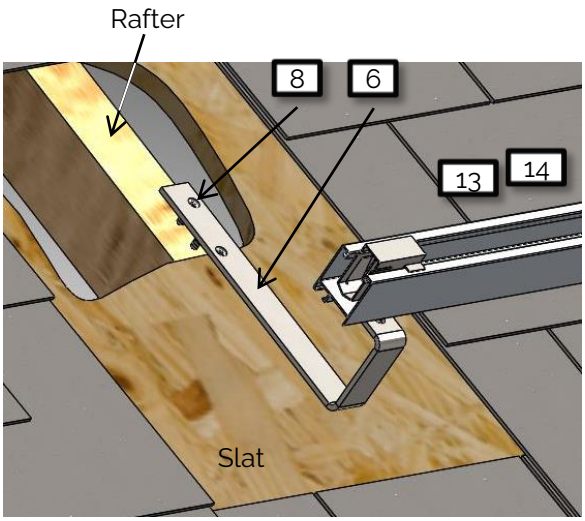


Note: - Insert a support plate between the battens.
- Secure the slate hook 6 or 7 preferably in the rafter using wood screws 8
- The slate hook can be secured in the support plate.

8.2.2) Configuration for laying on SLATS. (Represented without zinc sheets)

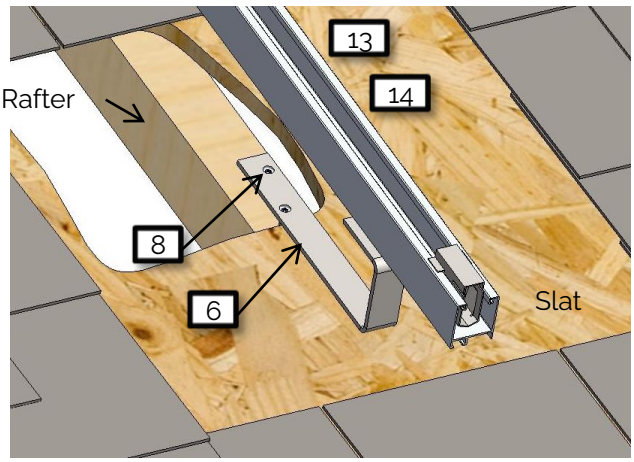
PORTRAIT MODE

FIXED model



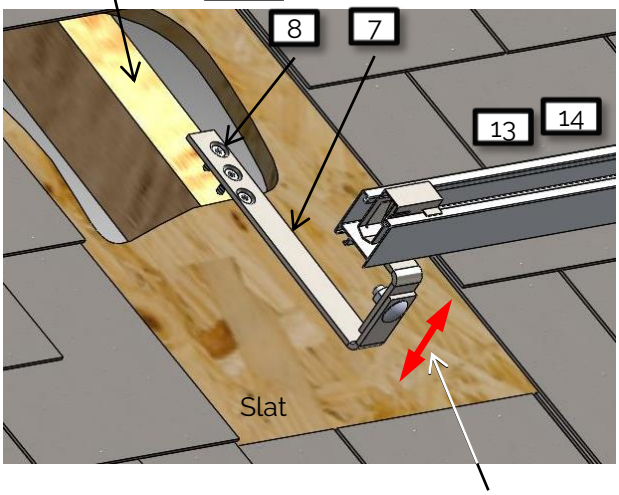
LANDSCAPE MODE

FIXED model

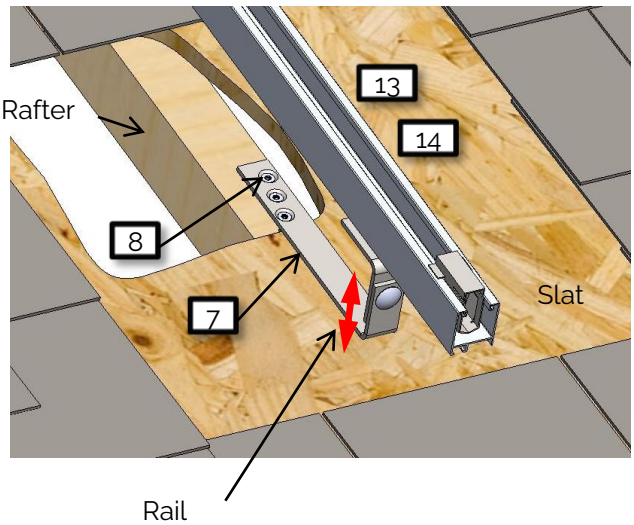


Rafter

ADJUSTABLE model

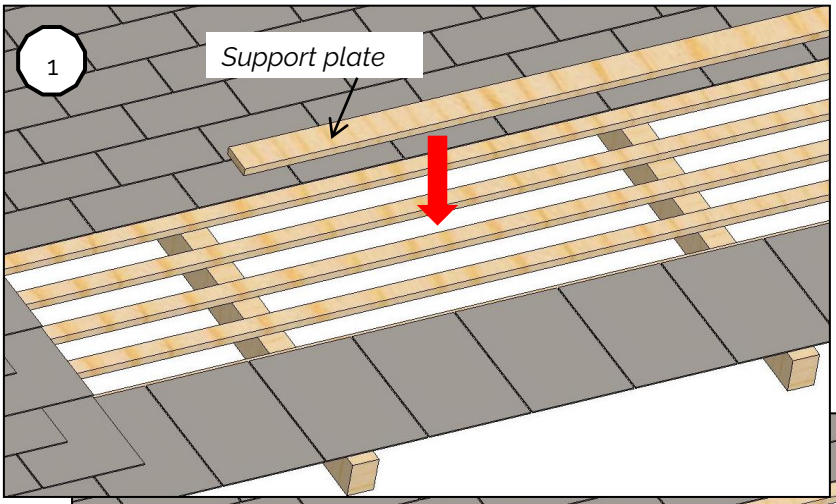


ADJUSTABLE model

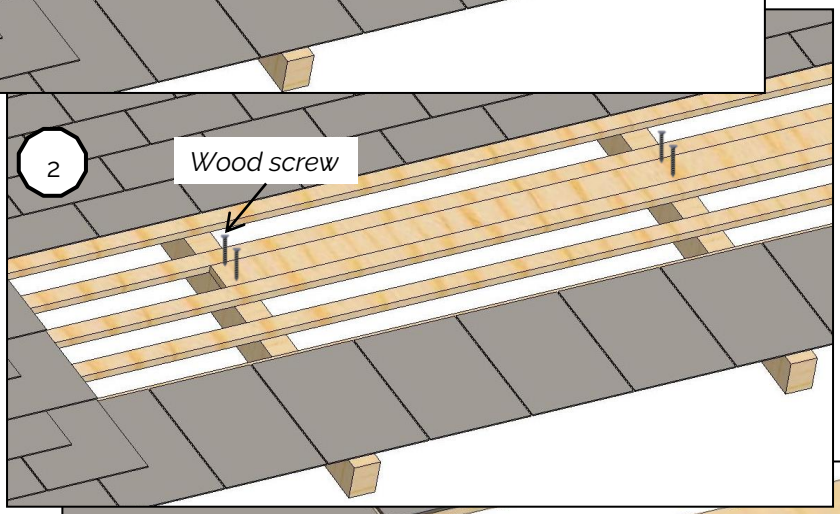


Note: - Secure the slate hook 6 or 7 preferably in the rafter using wood screws 8.
- The slate hook can be secured in the support plate.

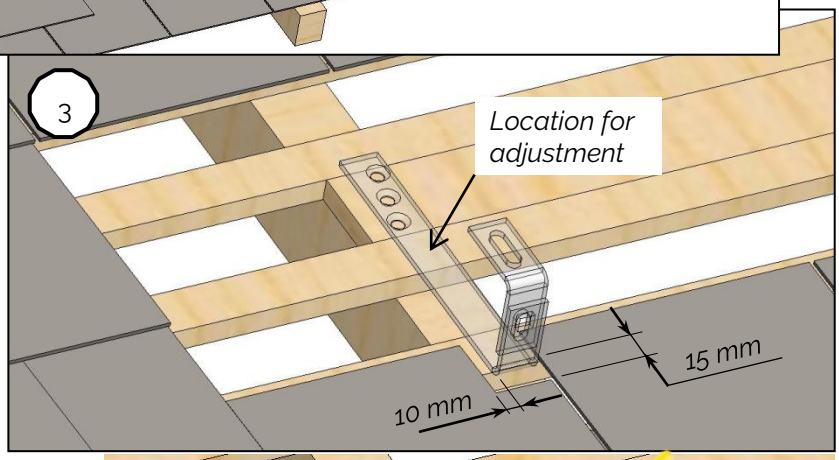
8.3) Mounting on rafters (example of laying on battens)



Mounting of support plate between the battens.

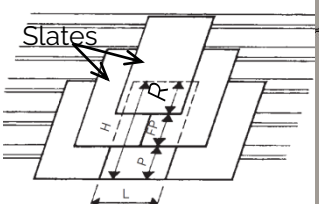


Mounting the support plate using wood screws on the rafters.

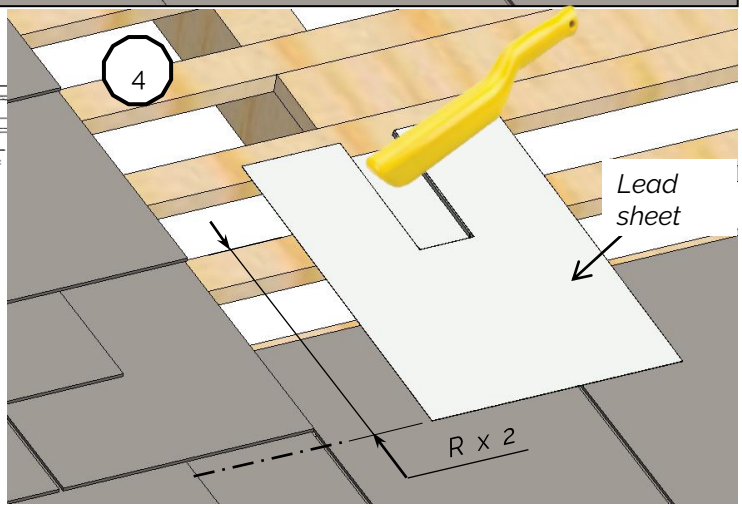


Cut slates at least 15 mm under the hook and at least 10 mm on each side of the hook.

Reminder



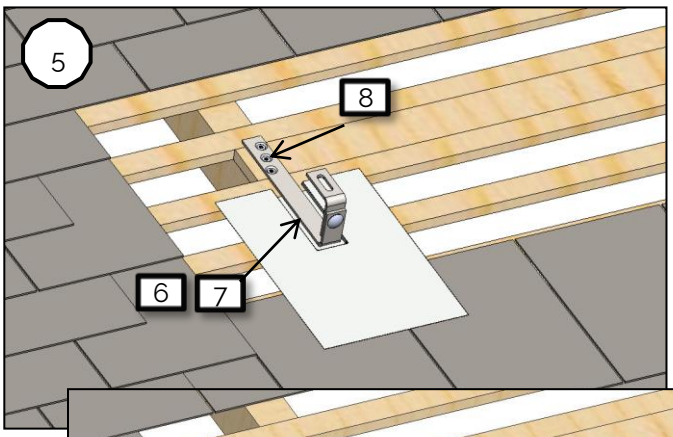
- R: Headlap, top part that never has water falling directly on it
- P: Margin
- FP: Overlap



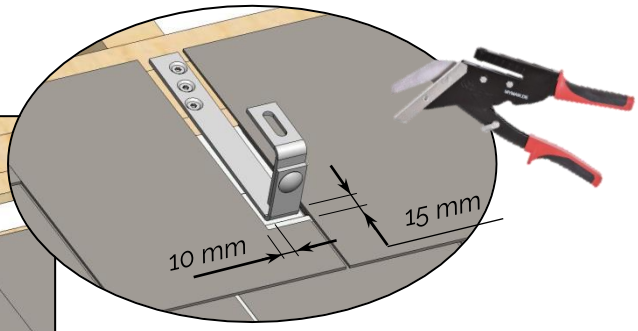
Laying the first lead sheet (Dimensions equivalent to those of the slate).

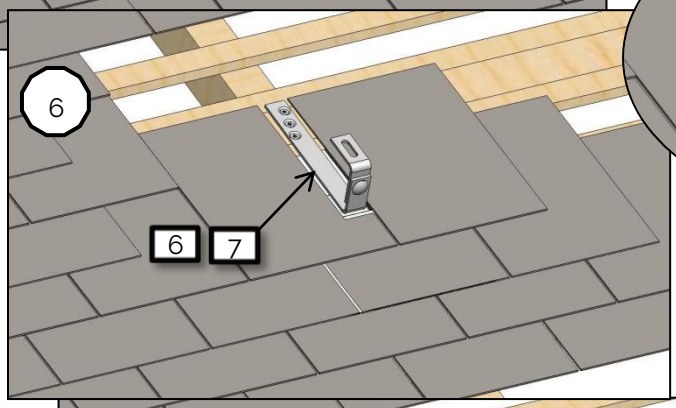
Shape the lower lead sheet in order to cover the slates located under the hook at a height equivalent to 2 x R. (Refer to manufacturer data)

Mounting on rafters (continued)

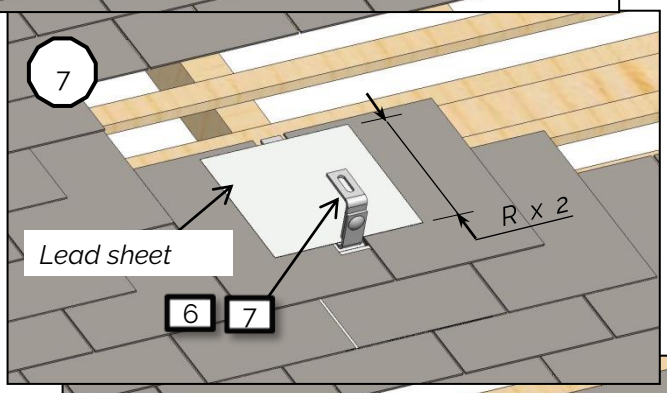


Mounting the Slate hook using wood screws 8

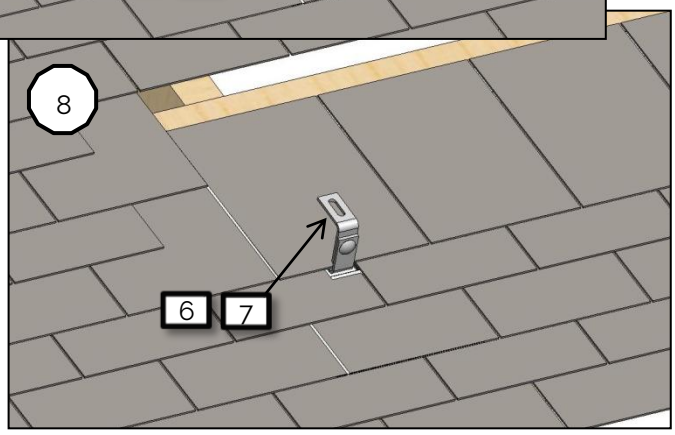




Cut slates at least 15 mm under the hook and at least 10 mm on each side of hook.
Rest the cut slates on the lead sheet.

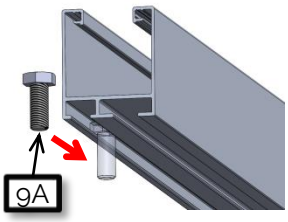


Laying the second lead sheet.
The upper lead sheet must cover the slates located beneath the hook along a height equivalent to 2 x R.
(Refer to manufacturer data.)



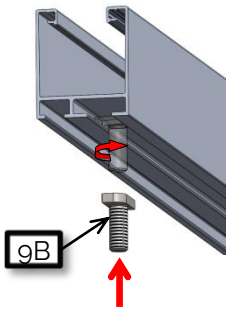
Resting slates on and around hooks.

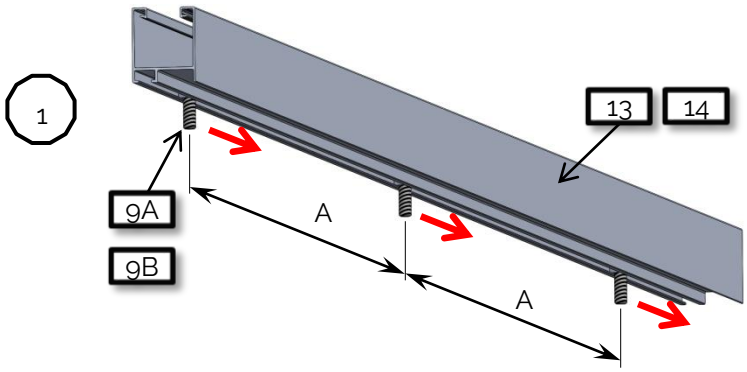
8.4) Installing the rail on the hook for SLATES & FLAT TILES



1 Slide the screws 9A or 9B (OPTION) in the rail 13 14 and position them in accordance with rafters (see p.12 à 17).

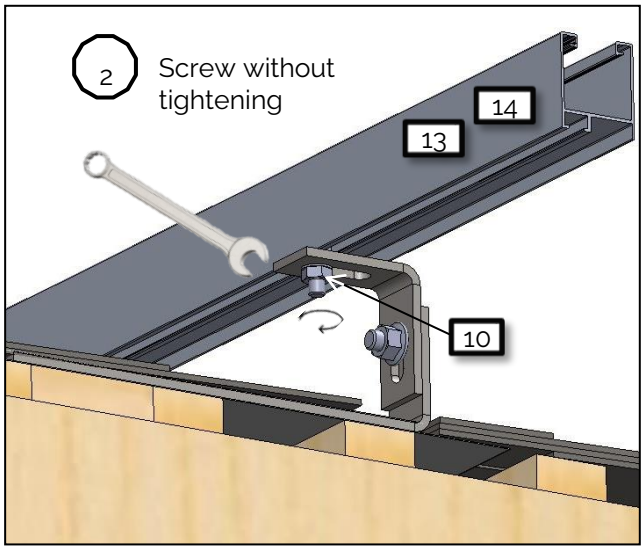
2 Engage the screws 9A or 9B (OPTION) that are pre-mounted on the rail in the oblong holes in the hooks and then tighten the nuts 10 .

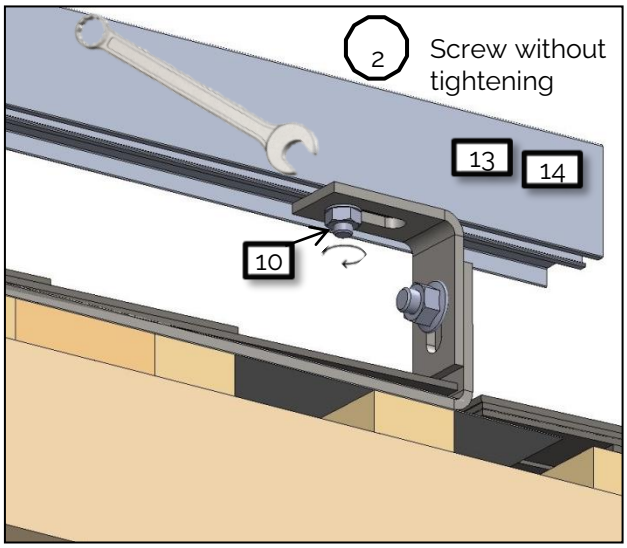


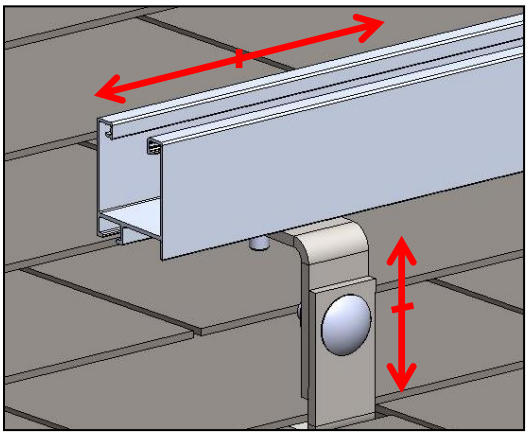


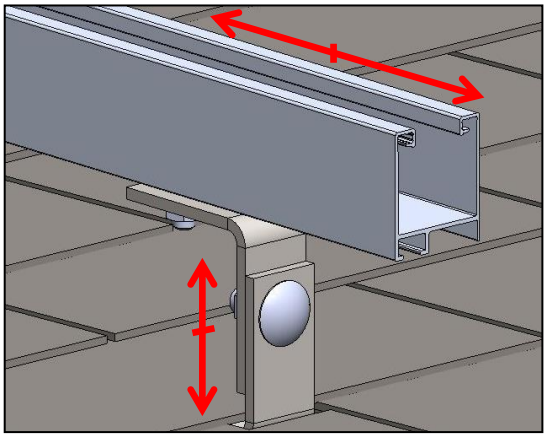
PORTRAIT MODE

LANDSCAPE MODE





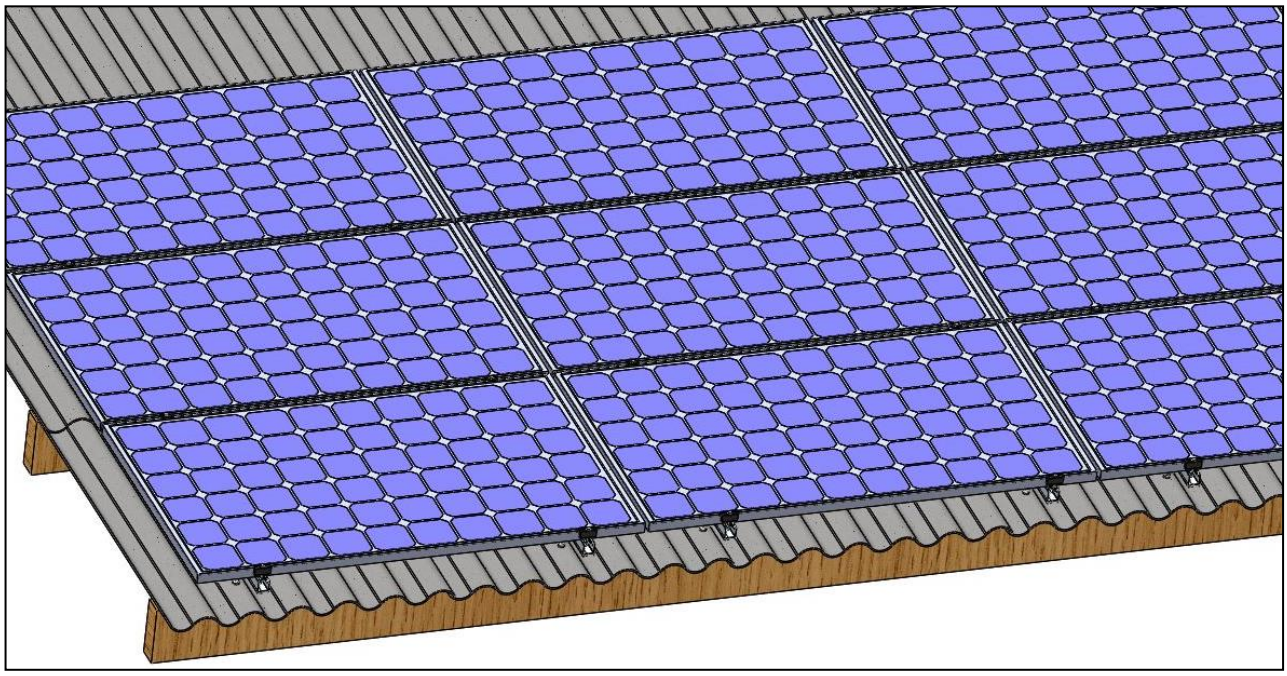




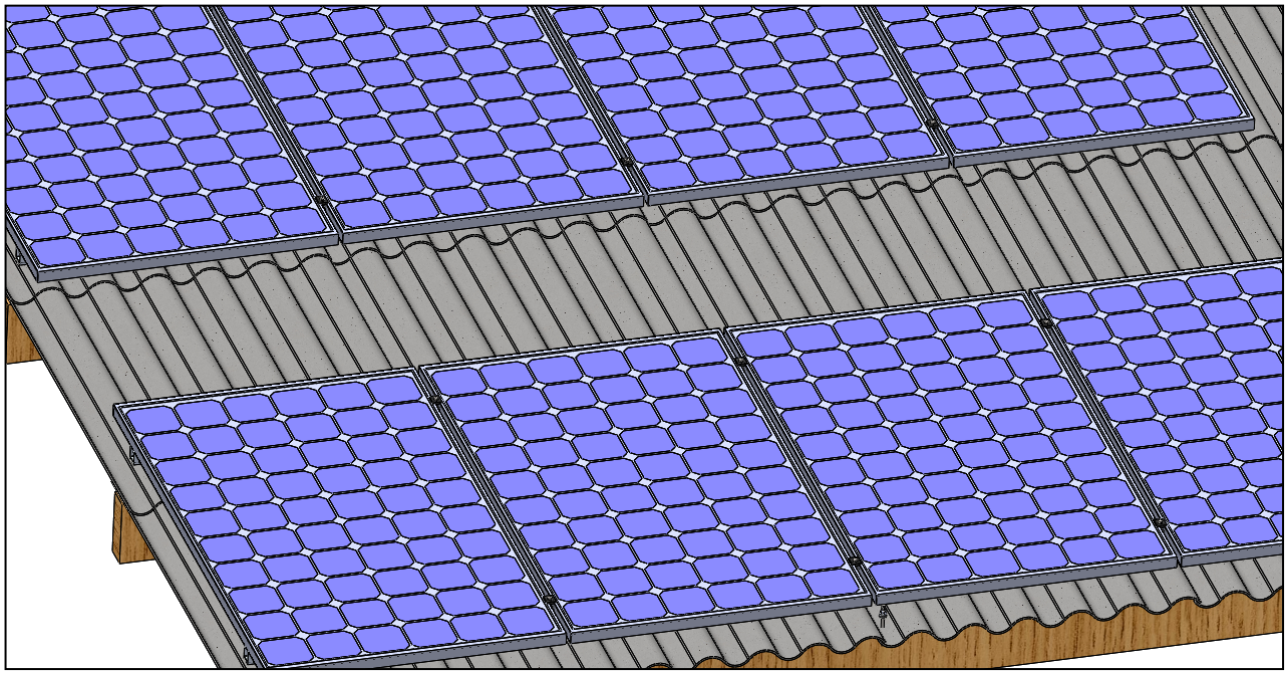
Adjust to desired position. Check that the field is flat.
Tighten the nut on the rail mounting bolt to maintain the desired position
Tightening torque 17.4 Nm.

9) Overview of the system on CORRUGATED STEEL SHEETS FIBRE CEMENT, UNDER-TILES PANELS

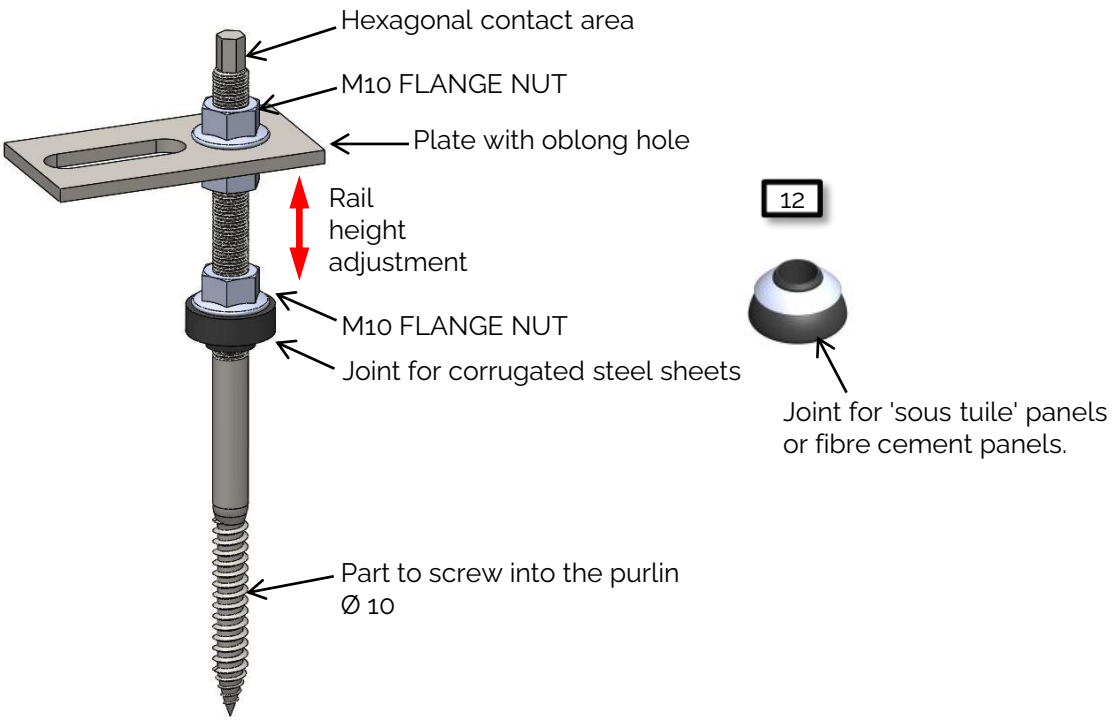
LANDSCAPE mode



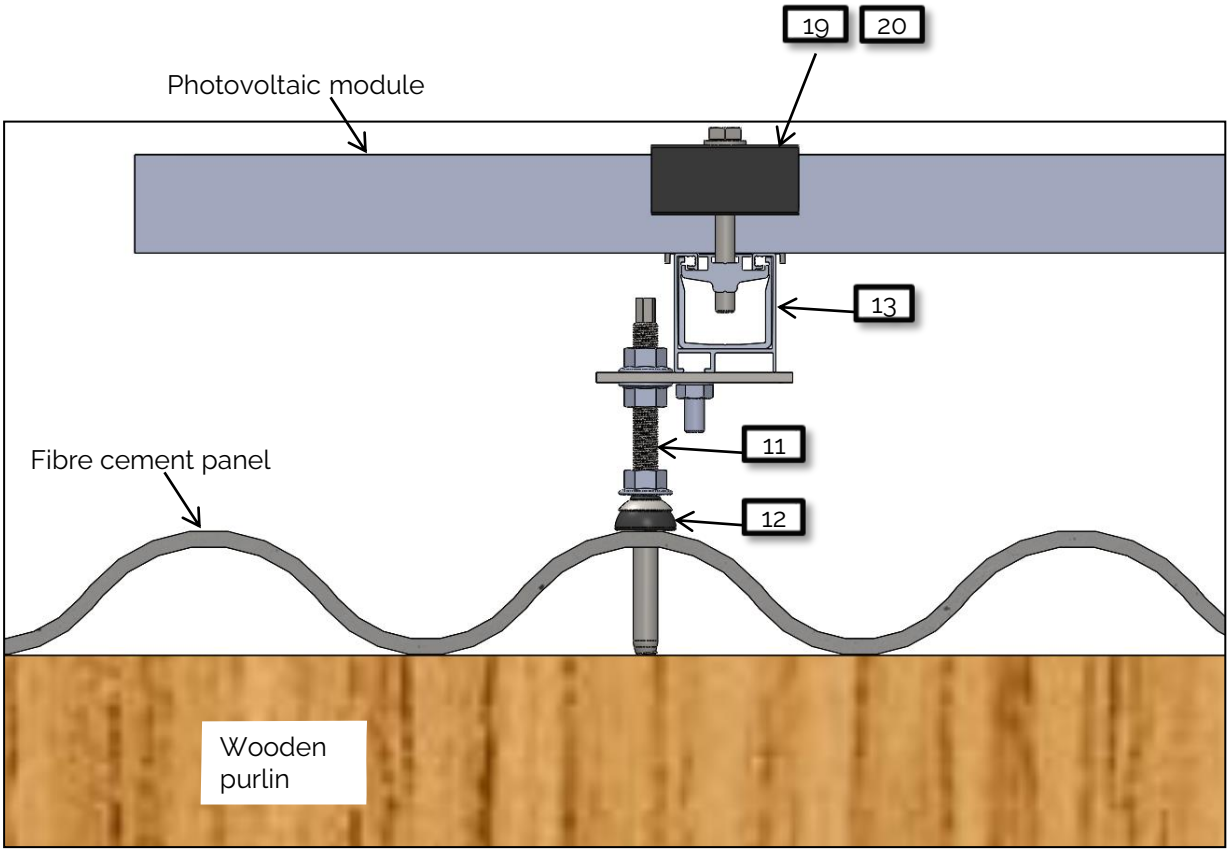
PORTRAIT Mode - Possible, but with a space between the PV modules and provided that the purlin spacing matches the module clamping areas.



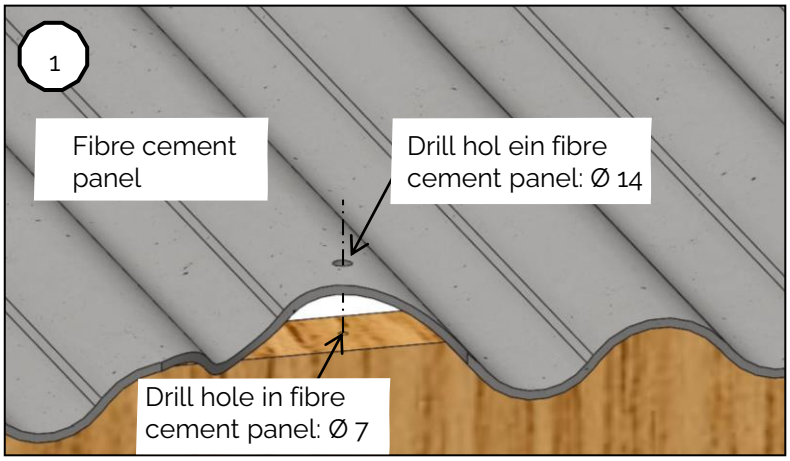
9.1) Presentation of the double thread screw assembly 11 for PANELS



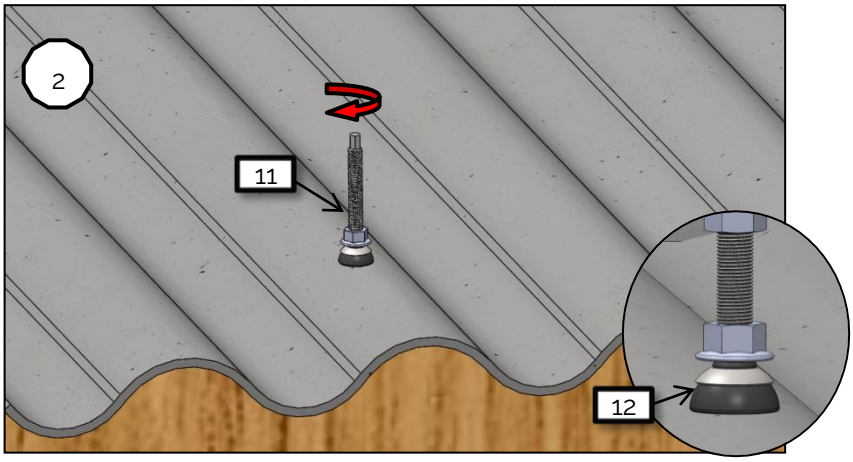
9.2) Installation on SHEET roofing



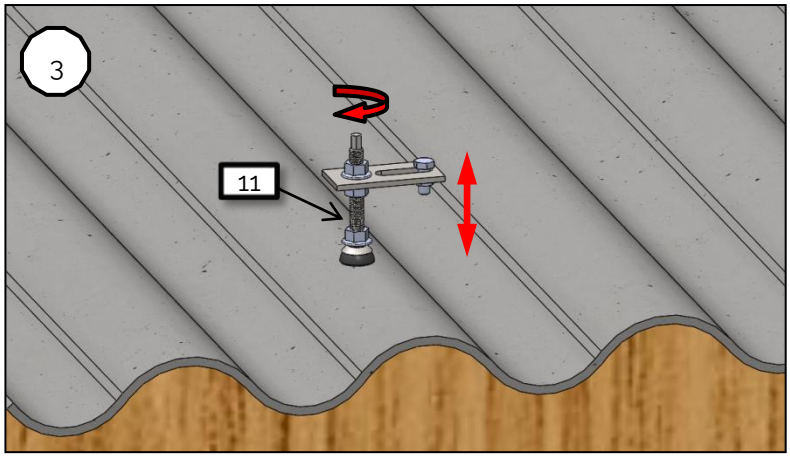
9.3) Securing the double thread screw 11 to wooden purlins (Example on fibre cement panels)



- Check the position of the purlins.
- Drill the fibre cement panel Ø 14 always at the top of the undulations.
- Drill hole in wooden purlin Ø 7.

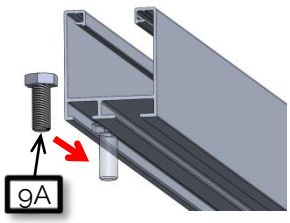


- Use the hexagonal contact area to screw the double thread screw assembly into the wooden purlin.
- Tighten sufficiently for the joint to cover the Ø 14 hole.



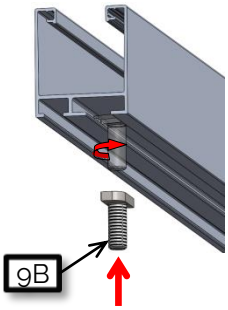
- Adjust to the desired rail height.
- Tighten the upper nut.

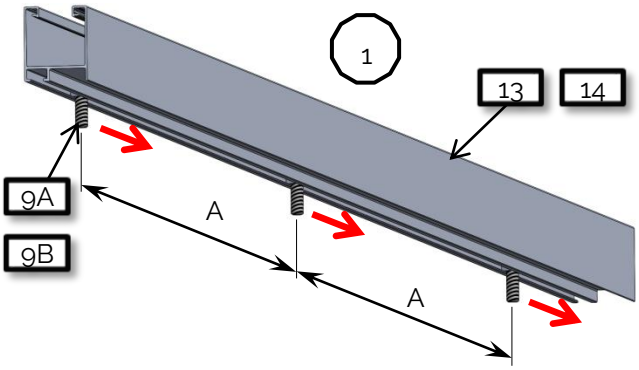
9.4) Installing the rail on the double thread screw assembly for PANELS

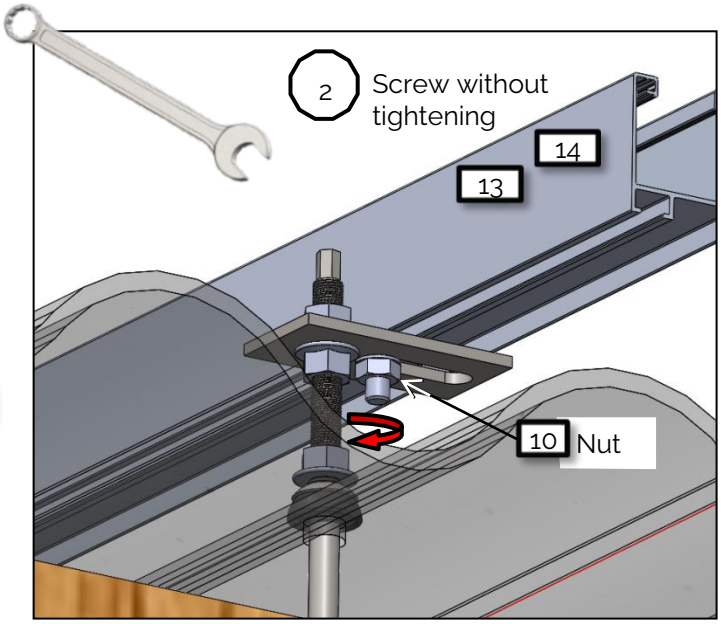


1 Slide the screws 9A or 9B (OPTION) in the rail 13 14 and position Them in accordance with rafters (see p.12 à 17).

2 Engage the screws 9A or 9B (OPTION) that are pre-mounted on the rail in the holes in the hooks and then tighten the nuts 10 .

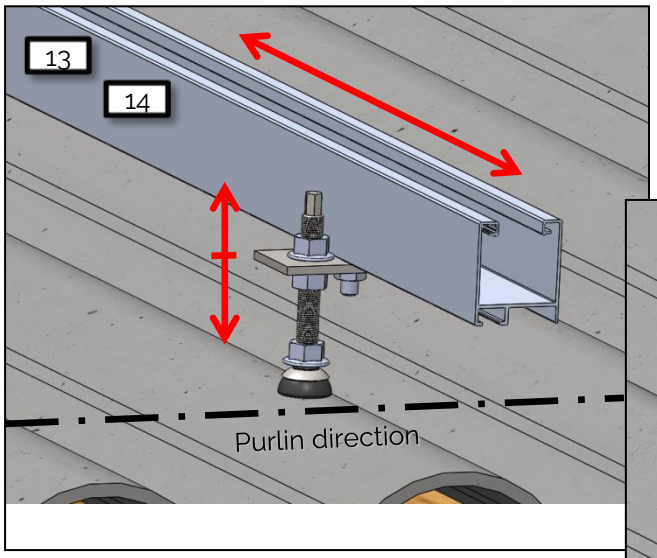






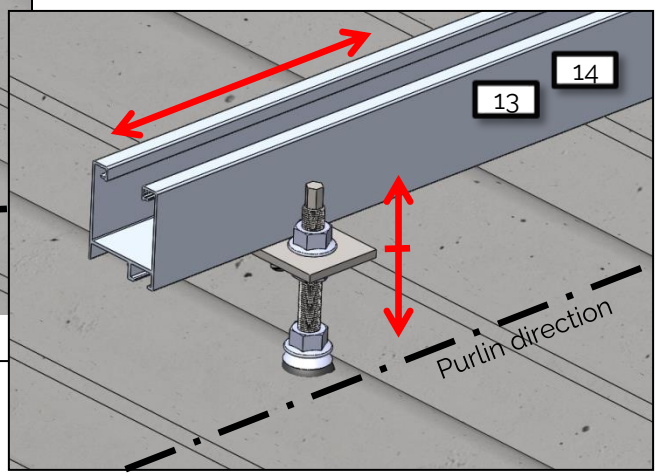
Note: In LANDSCAPE MODE, the rails are installed perpendicular to the purlins.
In PORTRAIT MODE, the rails are installed parallel // to the purlins.

LANDSCAPE mode



Adjust to desired position.
Check that the field is flat.
Tighten the rail mounting bolt to hold in the desired position.
Tightening torque 17.4 Nm.

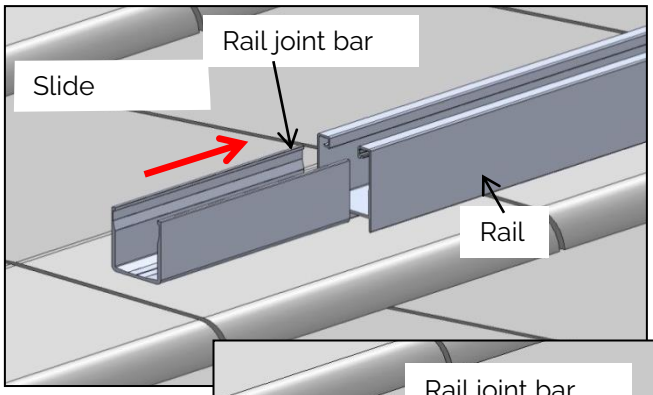
PORTRAIT mode



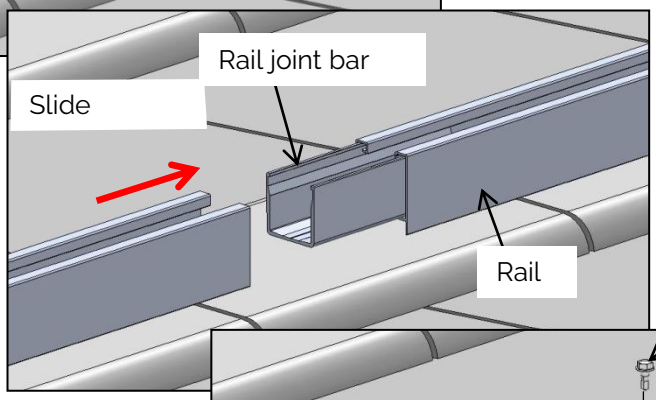
10) Joining the rail

According to the configuration and the needs of the installation, the rails can be joined end to end every 2 m. English German

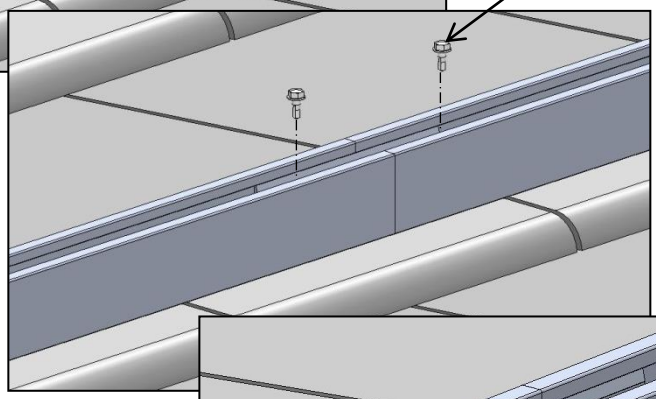
1



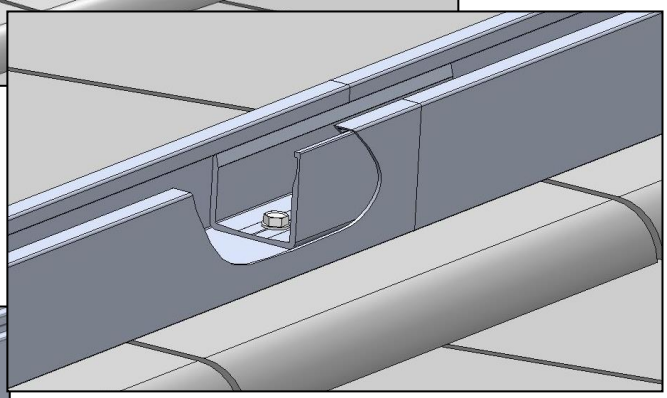
2

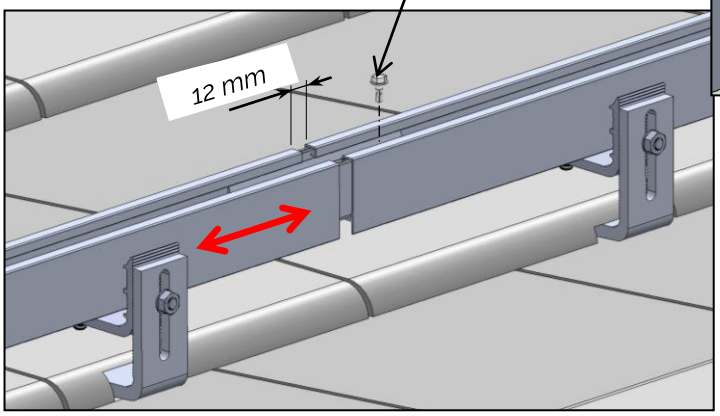


3



4





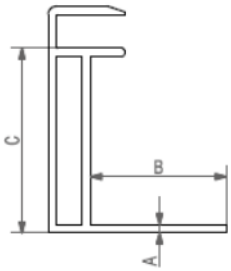
Every 12 m along the rail, leave a gap of at least 12 mm before the next rail.
To allow for rail expansion, only fasten one rail.
The other rail remains free.

11) Mounting the module

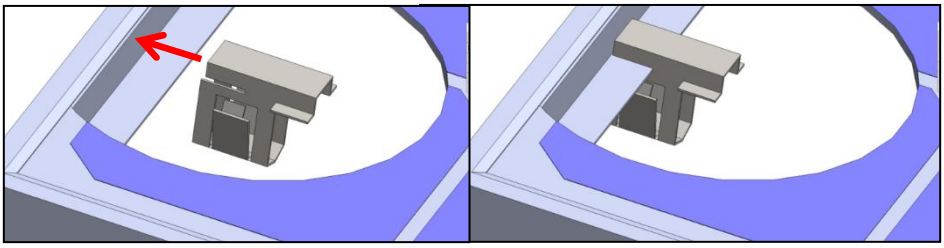
PV modules are mounted on the rail structure using module clips 18 or single clamp assemblies 19 20 on the edge of the PV field and using double clamp assemblies 16 17 in the middle of the field.

11.1.1) Mounting on edge of PV field using module clip

The profile of the frames of the PV modules must match the dimensions given in the following table:

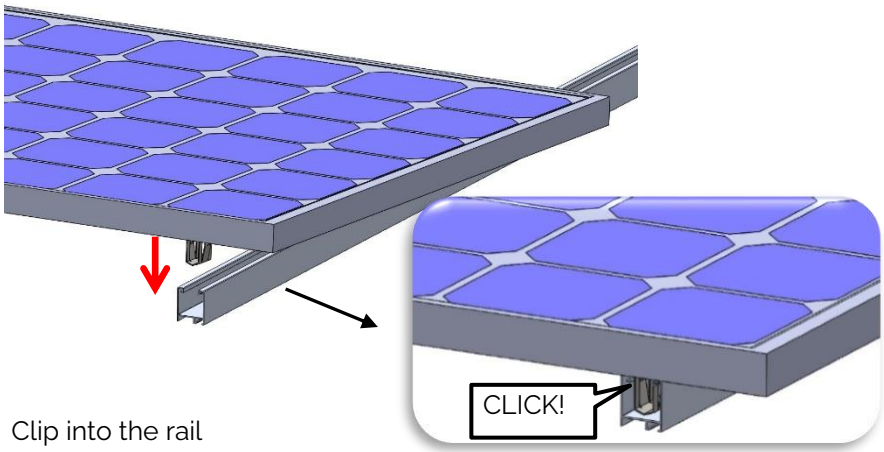


Dimensions	mm
A	1.5 to 2.2
B	Min. 16
C	Min. 30

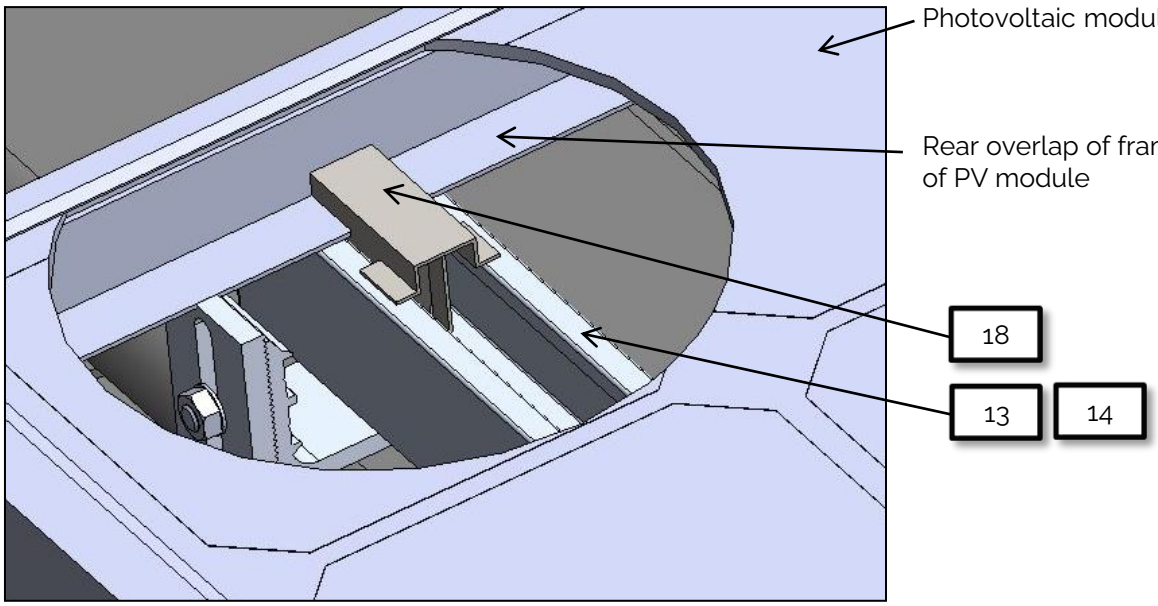


Module clip positioning (local section on front face of PV module)

The module clip 18 is inserted on the rear overlap of the frame of the photovoltaic module opposite a rail.



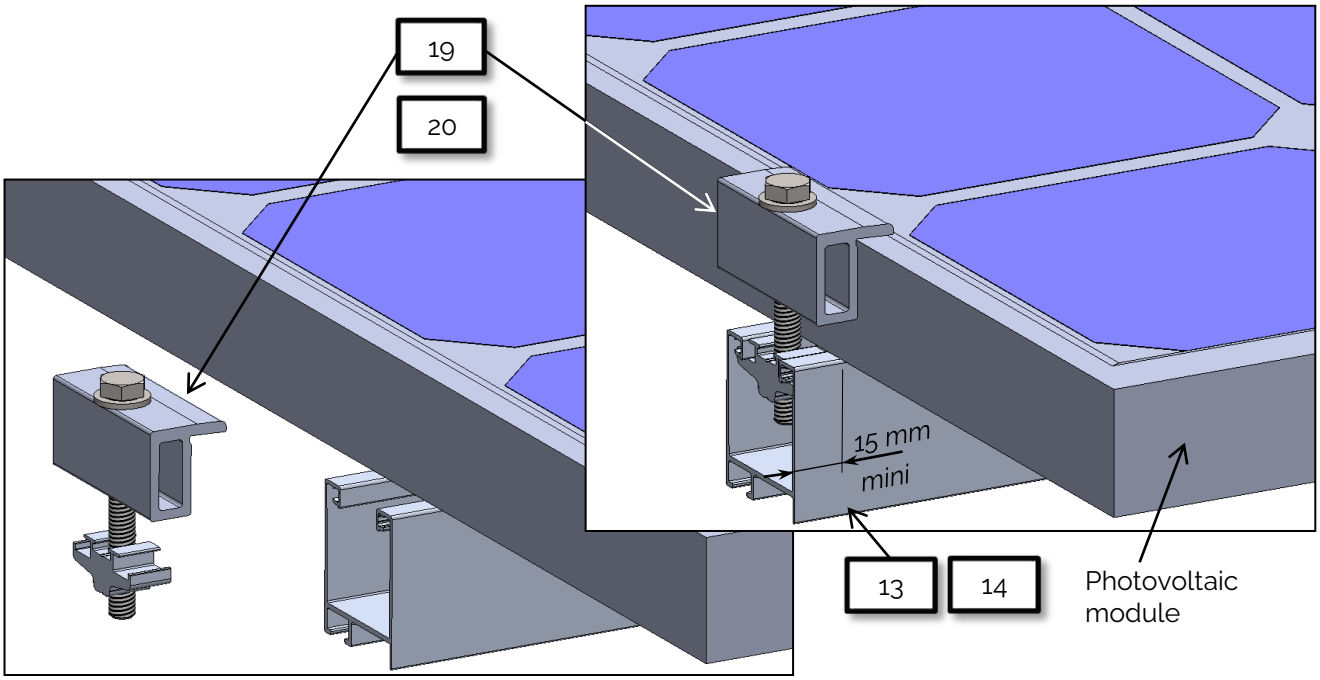
Clip into the rail



View of module clip installed (local section on front face of photovoltaic module)

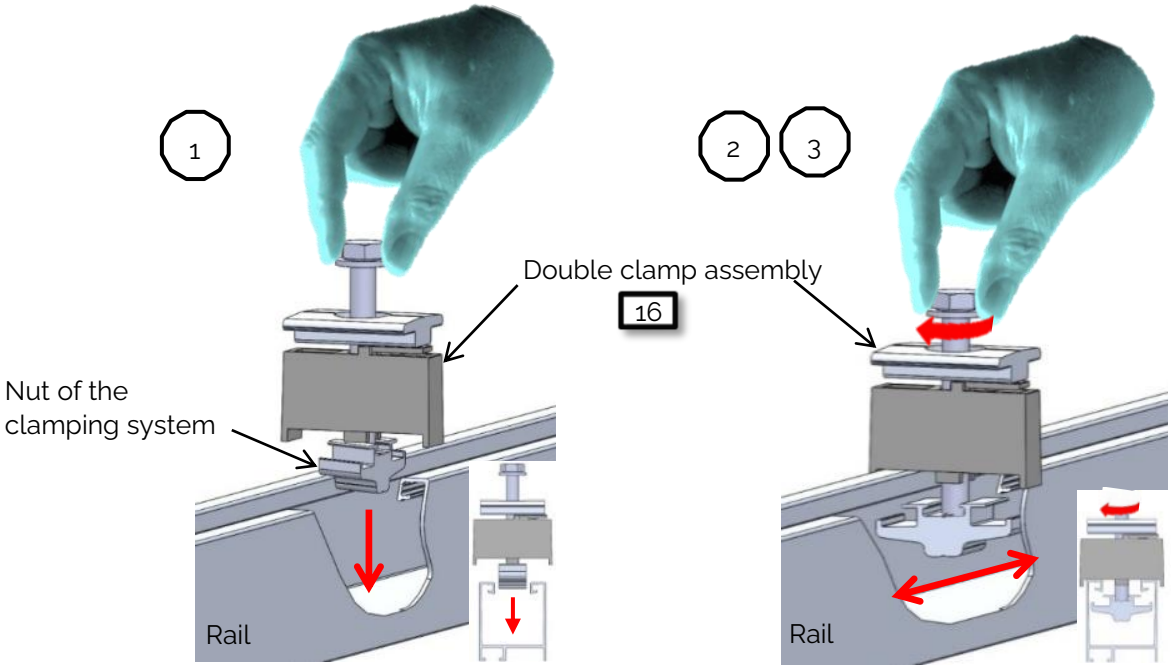
Note: The module clip is a single-use item. It must be replaced after each removal.

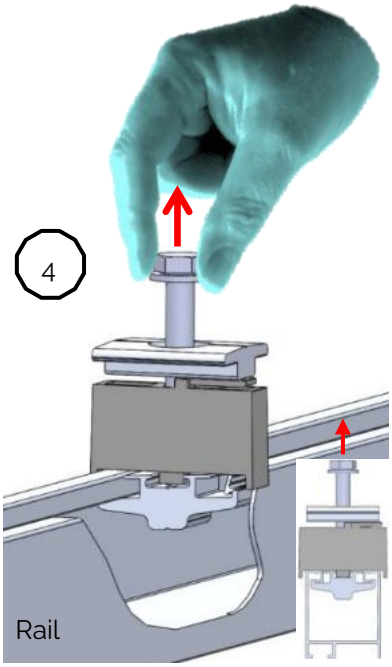
11.1.2) Mounting on edge of PV field using single clamp assembly

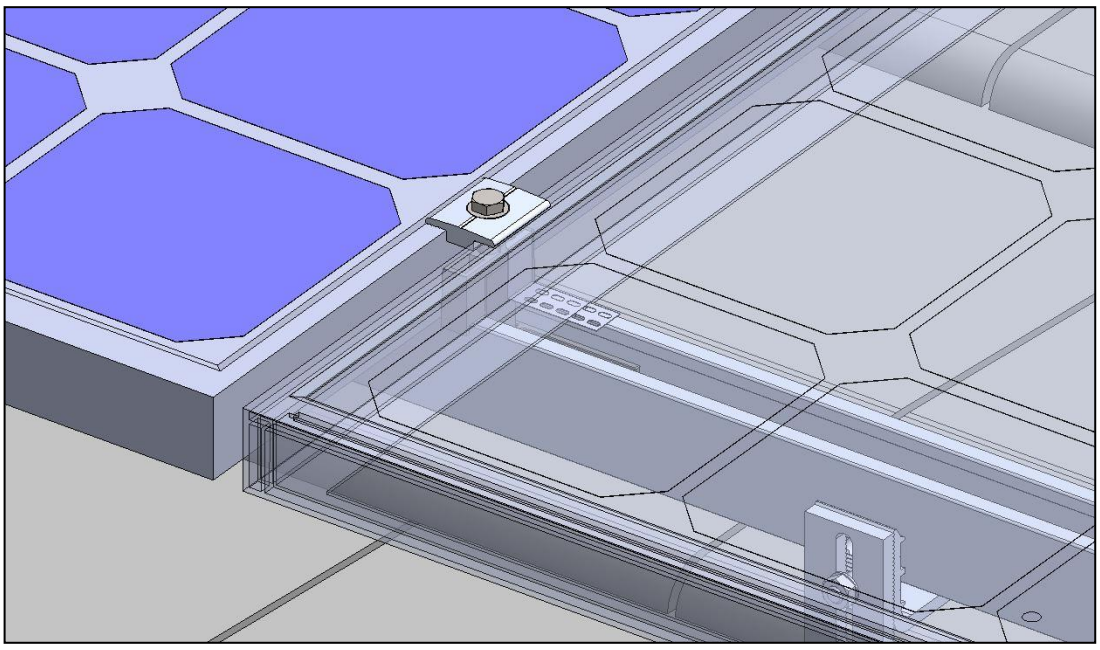


11.2) Mounting in middle of PV field using double clamp assembly

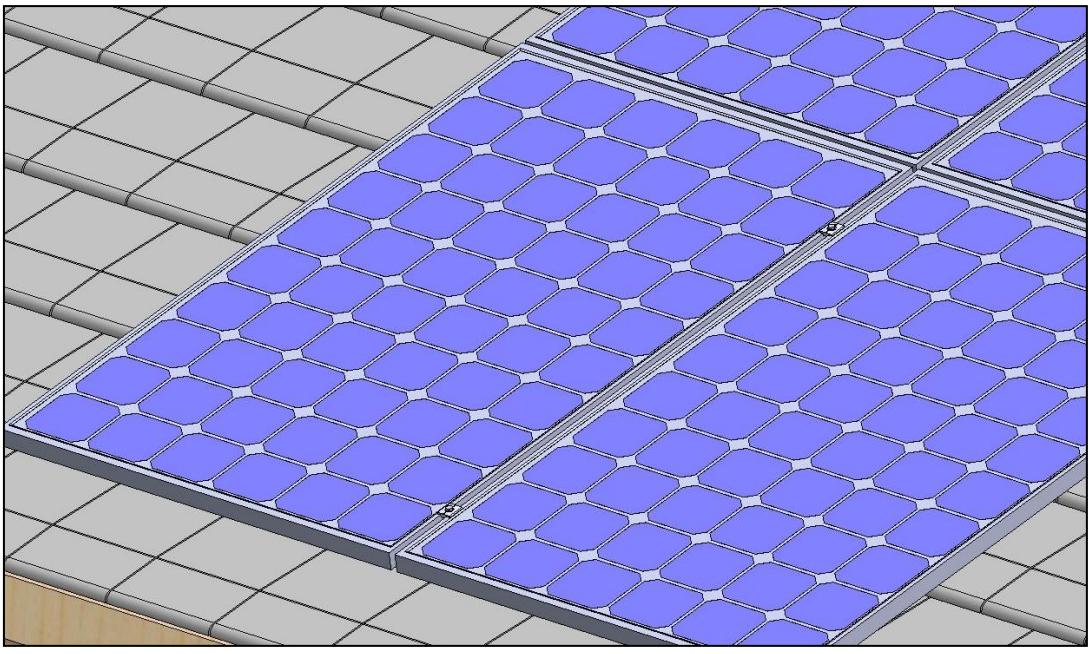
Insert the double clamp assembly 16 in the rail 13 14
Turn the nut of the clamping system 1/4 turn,
Slide in the rail up to the module,
Pull the double clamp assembly upwards.







Intermediate installation – Implementation of the PV MODULE. (PV showing through)



Intermediate module mounting

Once the PV modules have been positioned on either side of the double clamping assembly 16 ,
tighten the clamp screw.
Tightening torque 17.4 Nm.

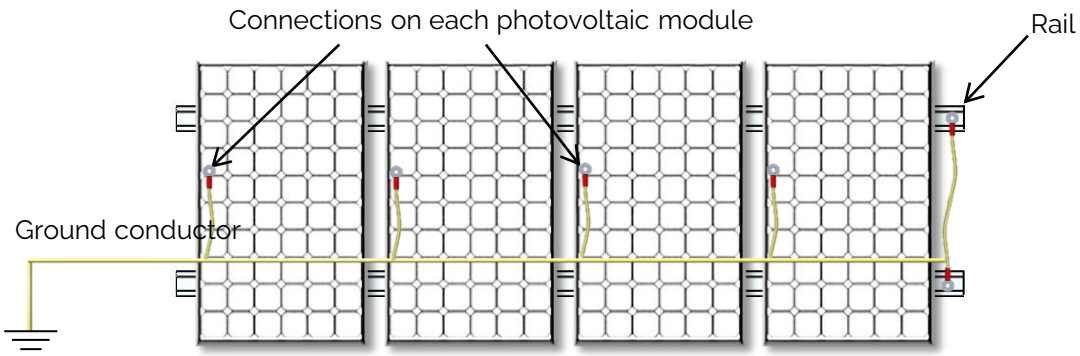
12) Grounding

General:

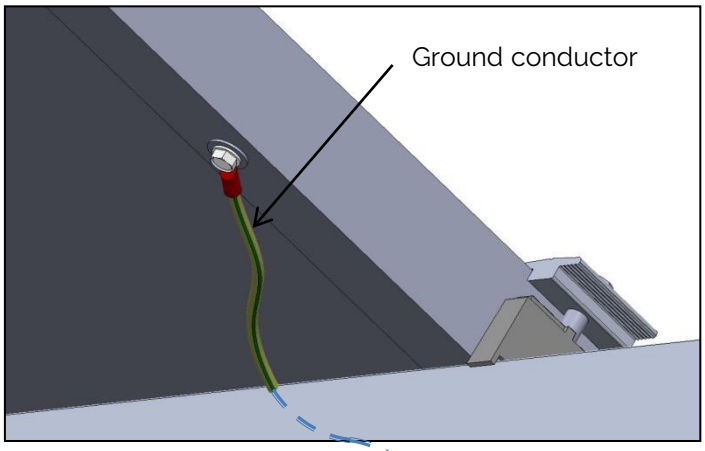
The work must be carried out by a company specialising in electrical installations.
Refer to the NF C15-100 standard

12.1) Grounding via wired connection

The system can be grounded by connecting a ground conductor to the rear of each photovoltaic module, and then to the ground of the building.
Use the holes drilled for this purpose in each module and each rail.



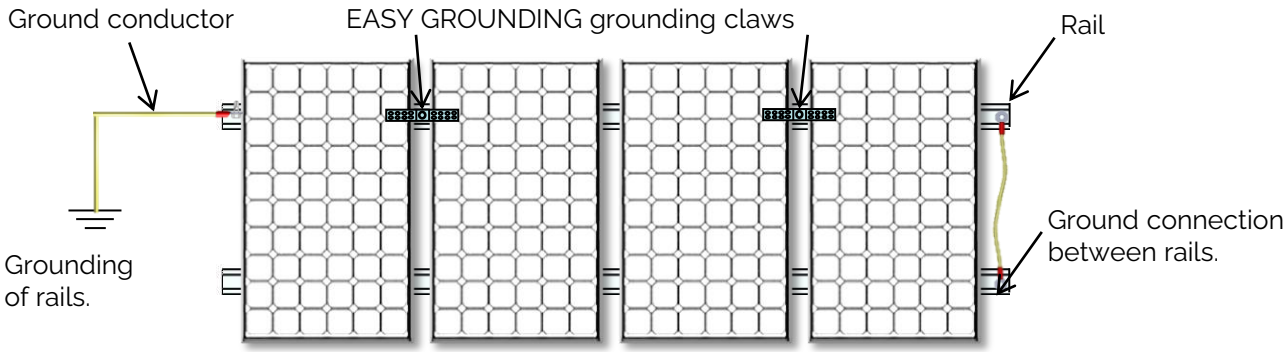
Grounding
of rails.

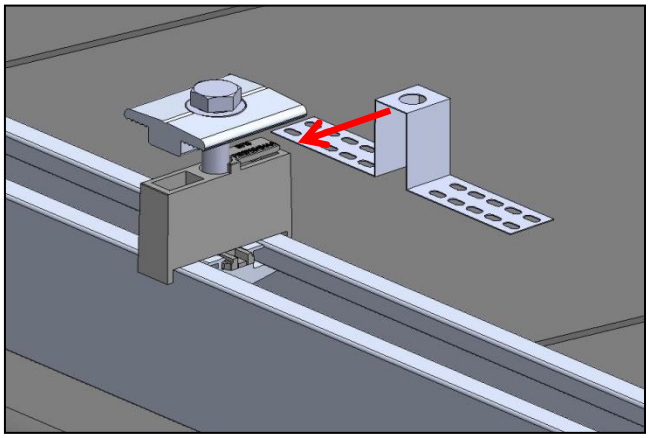


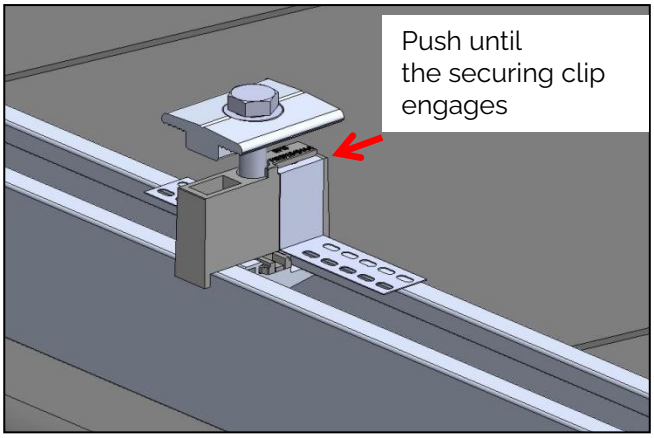
To ground connection

12.2) Grounding with EASY GROUDING (OPTION)

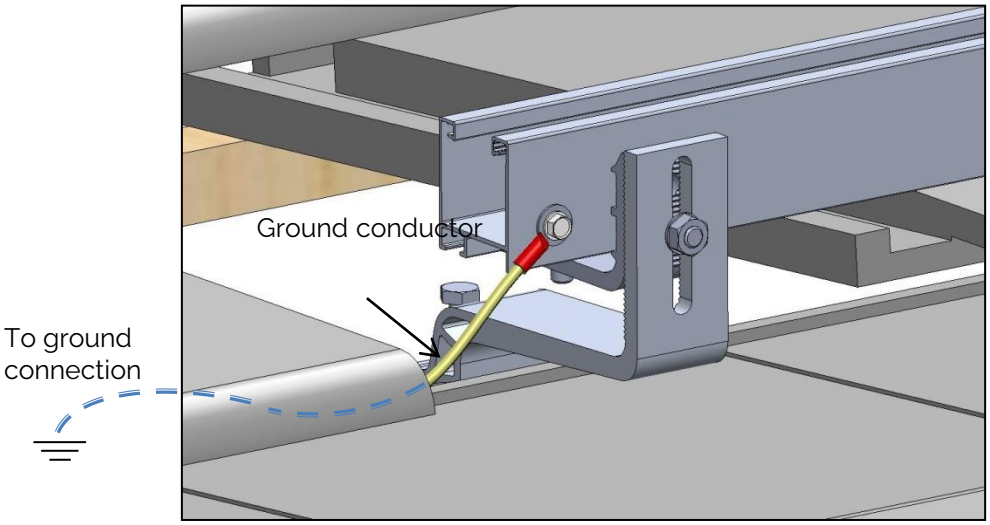
You can also use the EASY GROUNDING claw by inserting it on the double clamp assembly.
Ground continuity between all the photovoltaic modules is thus created.
Insert the EASY GROUNDING claws into just one of the two rails, alternate photovoltaic modules.



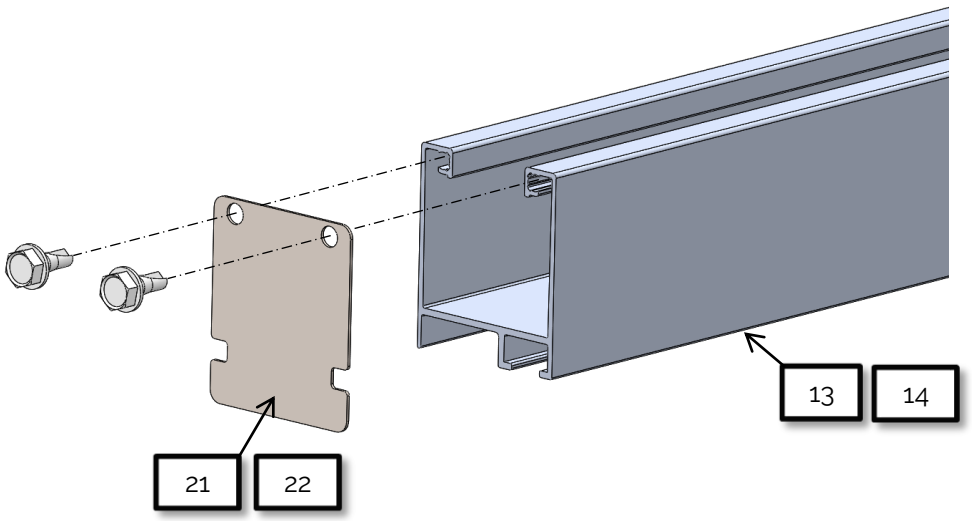




Connect the rail to the house's ground system using a ground conductor and a self-tapping screw.



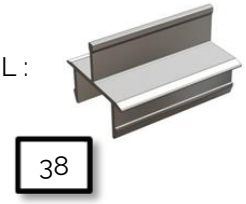
13) Closing the ends of the rail

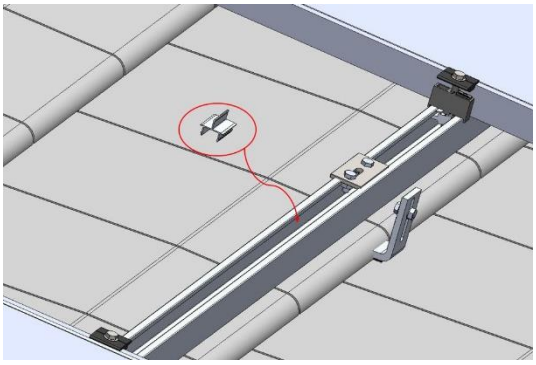


ANNEXE A1 : Rail reinforcement (optional)

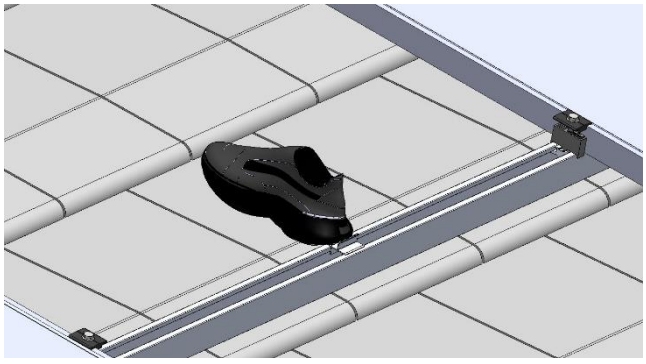
In order to walk on the rail, the TOP RENFORT RAIL piece must be used. This piece goes into the rail and is a support for the foot.

TOP RENFORT RAIL :





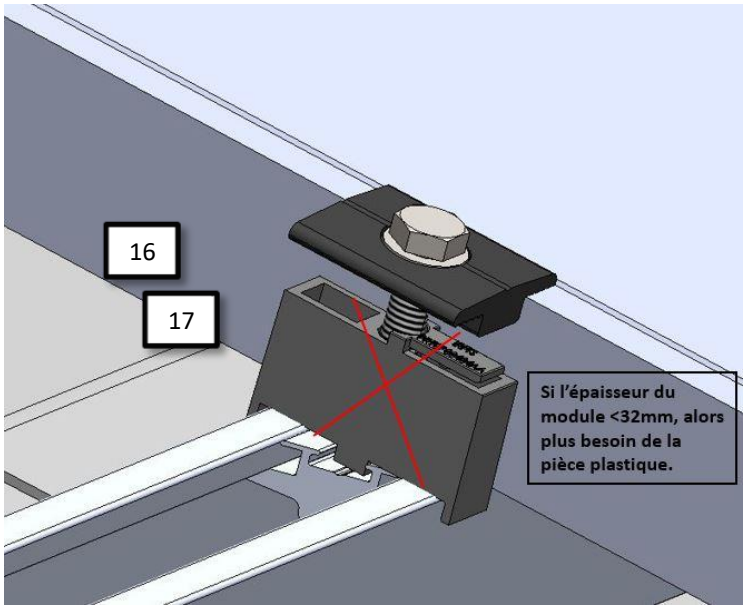
This piece is added at every place we need to put the foot on. Then man can walk as follows:



ANNEXE A2 : Operating mode for pv module with thickness< 32 mm

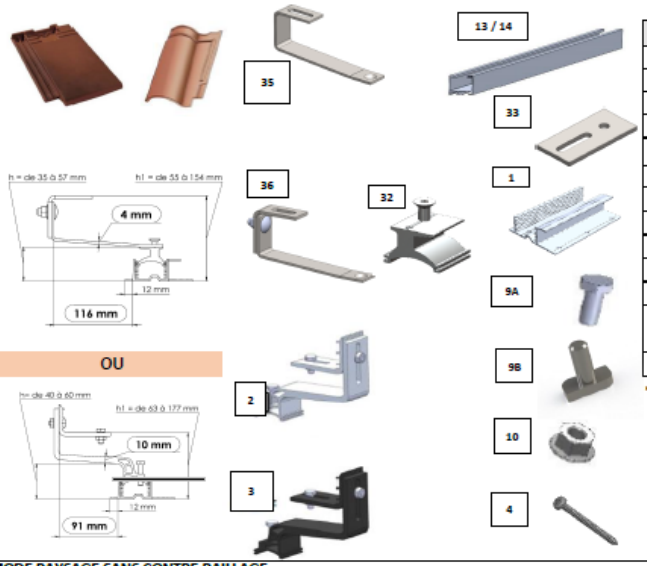
REMINDER : In this configuration, you need to use the TOP SET SINGLE CLAMP. Please note the TOP CLIP MODULE is not compatible.

For the installation of all the modules with a thickness between 30 and 32 mm, the plastic part pre-assembled on the TOP SET DOUBLE CLAMP must be removed. It is not possible to use Easy Grounding. The earth connection must therefore be made directly on the photovoltaic module, see page 54.



ANNEXE B : Synoptic Easy-Roof

CROCHETS TUILES MECANIQUES

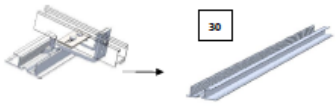


REFERENCE	DESIGNATION	REPERE
092458	TOP EMBASE CROCHET TUILE 8-28 150	1
092420	TOP ENS CROCHET TUILE 65-152	2
092422	TOP ENS CROCHET TUILE 65-152 NOIR	3
092367	VIS TB 6 x 70	4
092458	TOP EMBASE CROCHET TUILE 8-28 1250 (PAYSAGE)	30
092343	TOP PLAQUE 82x40x5	33
092698	CROCHET FIXE TUILE PLATE	35
092696	TOP ENS CROCHET REGLABLE TUILE PLATE (OPTION)	36
092594	TOP SUPPORT TIGE FILETEE	32
092919	TOP RAIL STD 2360	13
092920	TOP RAIL STD 2360 NOIR (OPTION)	14
092365	VIS TH M8 x 20	9A*
092377	VIS MARTEAU M8 x 20 (OPTION)	9B*
092362	ECROU M8 EMBASE CRANTEE	10

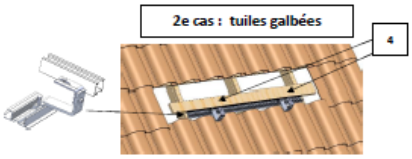
*La vis tête marteau 9B est une variante de la vis 9A uniquement

MODE PAYSAGE SANS CONTRE RAILLAGE

1er cas : cas de tuiles faiblement galbées

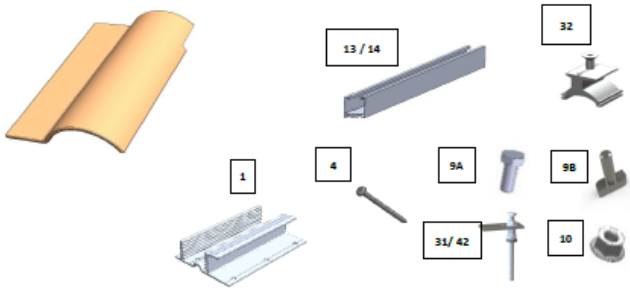


2e cas : tuiles galbées



MODE PORTRAIT

TUILE CANAL

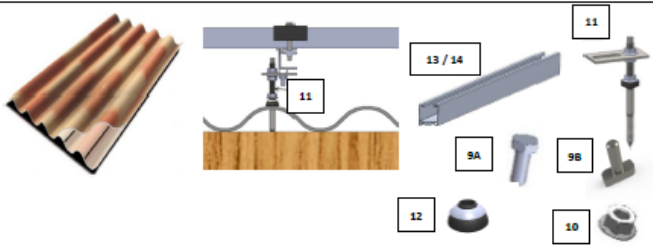


REFERENCE	DESIGNATION	REPERE
092458	TOP EMBASE CROCHET TUILE 8-28 150	1
092594	TOP SUPPORT TIGE FILETEE	32
092379	TOP ENS VIS M8*150 A2 **	31
092386	TOP ENS VIS M8 *200 A2 (OPTION) **	42
092367	VIS TB 6 x 70	4
092919	TOP RAIL STD 2360	13
092920	TOP RAIL STD 2360 NOIR (OPTION)	14
092365	VIS TH M8 x 20	9A*
092377	VIS MARTEAU M8 x 20 (OPTION)	ou 9B*
092369	ECROU M8 EMBASE CRANTEE	10

*La vis tête marteau 9B est une variante de la vis 9A uniquement

** Vis destinée uniquement pour le bois, si acier : commande spécifique

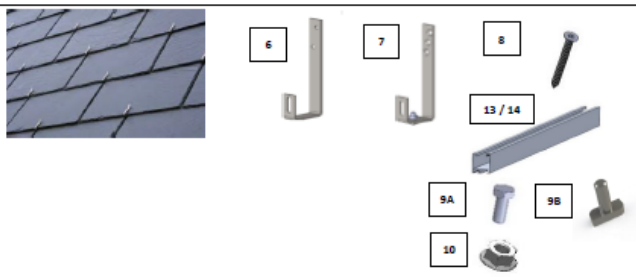
FIBRO-CIMENT / BAC ACIER SINUSOIDAL / PLAQUE SOUS TUILE



REFERENCE	DESIGNATION	REPERE
092375	ENS VIS DOUBLE FILET 10 x 200 M10 A2	11
092373	JOINT FIBROCIMENT 8,4*25 (OPTION)	12
092919	TOP RAIL STD 2360	13
092920	TOP RAIL STD 2360 NOIR (OPTION)	14
092365	VIS TH M8 x 20	9A*
092377	VIS MARTEAU M8 x 20 (OPTION)	ou 9B*
092362	ECROU M8 EMBASE CRANTEE	10

*La vis tête marteau 9B est une variante de la vis 9A uniquement

CROCHET ARDOISE

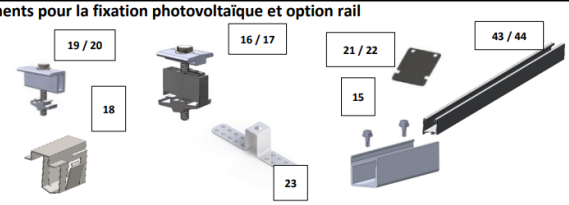


REFERENCE	DESIGNATION	REPERE
092478	TOP CROCHET ARDOISE	6
092480	TOP CROCHET ARDOISE REGLABLE (OPTION)	7
092369	VIS TF 6 x 50	8
092919	TOP RAIL STD 2360	13
092920	TOP RAIL STD 2360 NOIR (OPTION)	14
092365	VIS TH M8 x 20	9A*
092377	VIS MARTEAU M8 x 20 (OPTION)	ou 9B*
092362	ECROU M8 EMBASE CRANTEE	10

*La vis tête marteau 9B est une variante de la vis 9A uniquement

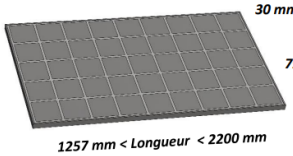
EASY ROOF TOP SYSTEM assembly instructions

Eléments pour la fixation photovoltaïque et option rail



REFERENCE	DESIGNATION	REPERE
092542 / 092547	BRIDES SIMPLES EN GRIS / OPTION : NOIR	19 gris / 20 noir
092431 / 092434	BRIDES DOUBLES EN GRIS /OPTION : NOIR	16 gris / 17 noir
092743	CLIPS MODULES	18
092700	EASY GROUNDING	23
092437	TOP ENS ECLISSE RAIL STD 150	15
092569 / 092571	FERMETURE DE RAIL EN GRIS / OPTION : NOIR	21 gris / 22 noir
092611 / 092613	TOP RAIL 3500 EN GRIS / OPTION : NOIR	43 / 44

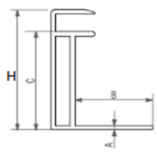
Compatibilités des modules photovoltaïques



30 mm < Hauteur < 51 mm

798 mm < Largeur < 1170 mm

1257 mm < Longueur < 2200 mm



Pour l'utilisation du clip 18

1.5 mm < A < 2.2 mm
B : mini 16 mm
C : mini 30 mm
32 mm < H < 51 mm

Le système d'accroche sur charpente n'inclut pas la reprise d'étanchéité - merci de vous référer à la notice de pose du système EASY ROOF TOP

NOUVEAUTE EN PARTENARIAT AVEC S:FLEX

TOITURE EN TÔLE TRAPEZOÏDALE

1 A **Composants pour les raccords de toiture** PORTRAIT (uniquement)

1 B **Composants pour les raccords de toiture** PAYSAGE

4 **Supports d'extrémité**

5 **Supports de module**

12

6 **Ensemble antidérapant** PORTRAIT (uniquement)

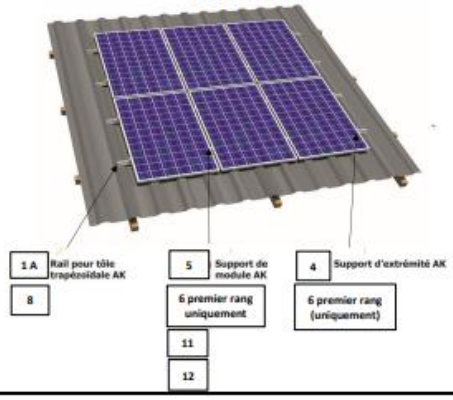
7 **Clip de verrouillage** PAYSAGE (uniquement)

8

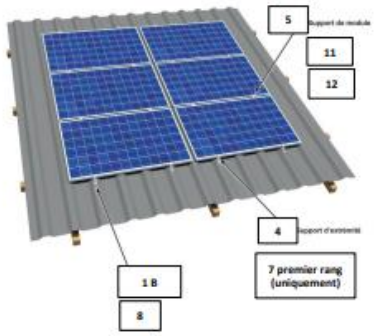
11 **Clips de câble (en option)**

REFERENCE	DESIGNATION	REPERE
092553	SF TRAPEZOIDAL SM RAIL AK 395 (PORTRAIT)	1A
092550	SF HS RAIL HK 125 (PAYSAGE)	1B
092541 / 092543	SF BRIDES SIMPLES AK 30-50 EN GRIS / OPTION : NOIR)	4 gris / noir
092544 / 092546	SF BRIDES DOUBLES AK 30-50 EN GRIS / OPTION : NOIR	5 gris / noir
092554	SF VIS DE BLOCAGE PORTRAIT	6
092548	SF PIECE BLOCAGE PAYSAGE AK	7
092555	SF VIS 4,5*25 A2	8
092551	SF CABLE CLIP	11
092552	SF KIT MISE A LA TERRE	12

MODE PORTRAIT



MODE PAYSAGE



OUR ROOFING SOLUTIONS

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