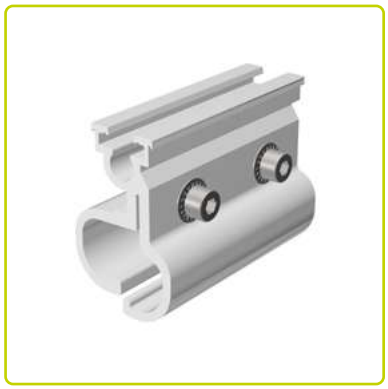
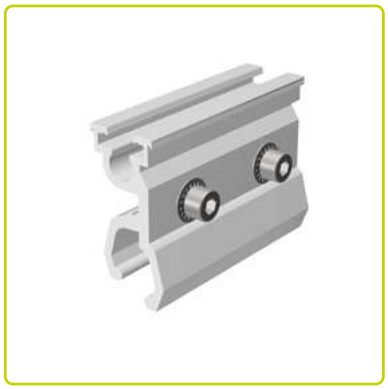
S:FLEX

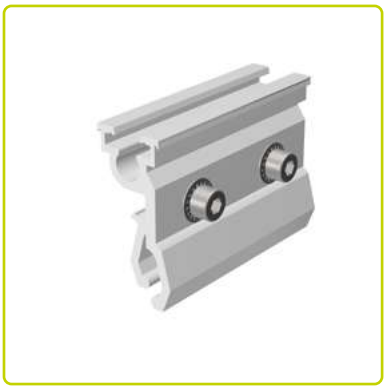
Assembly Instructions

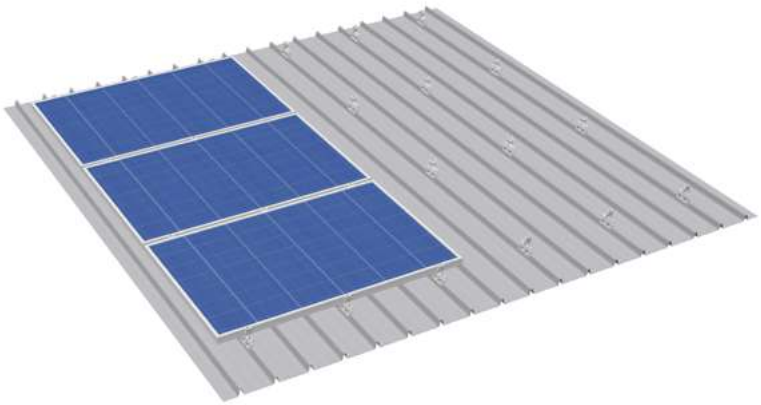
Clamp for Standing Seams

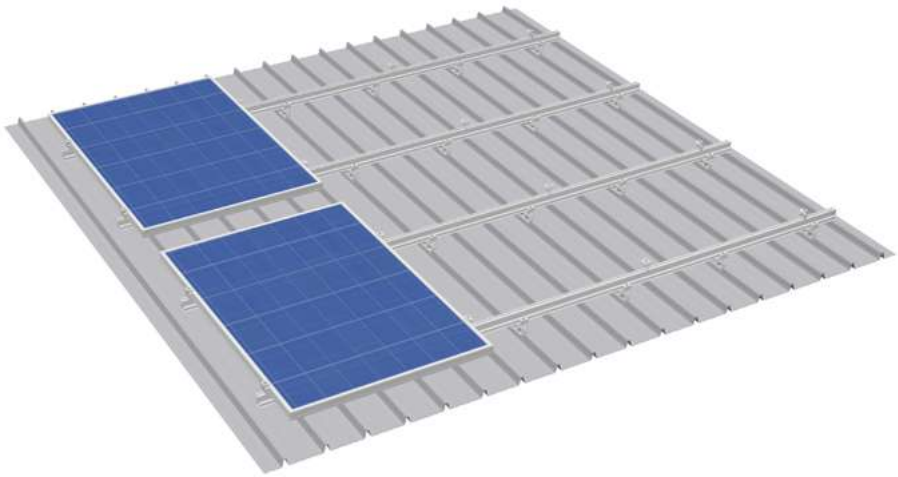
Frame system for coverings with standing seams metal roofing











© S:FLEX GmbH 04/2024/ Subject to technical modifications

1 Introduction

1.1 Intended use 3
1.2 About the document 3
1.3 Warnings 4
1.4 General information — standards and guidelines 4
1.5 Description of the system 6

2 Fitting the clamp for standing seams

2.1 System components 7
2.2 Direct roof fastening using the clamp 8
2.3 Assembly for direct module installation 8
2.4 Installation - single layer substructure 17

3 Disassembly and disposal

3.1 Disassembly 28
3.2 Disposal 28

4 Terms of use and warranty

4.1 User agreement 29
4.2 Warranty / disclaimer 29

© S:FLEX GmbH 04/2024/ Subject to technical modifications

Read these installation guidelines carefully before installing the S:FLEX mounting system and retain them for future reference!
These installation guidelines are only complete with the project-specific implementation plans (project report)!

The S:FLEX PV fastening system for standing seams metal roofs is a frame system for mounting PV modules.
Both vertical and horizontal installation of the modules is possible using the S:FLEX fastening system. This includes the option of single-layer, as well as double-layer installation. Additionally, both framed and frameless PV modules can be fixed.

A particularly outstanding feature of the S:FLEX PV fastening system for standing seams metal roofs is the high availability of pre-assembled parts. The patented and proven Click-Technology ensures maximum reduction of installation times. All components are generally made of aluminium and stainless steel. The high degree of corrosion resistance ensures a long service life and offers the possibility of complete recycling.

1.1 Intended use

The S:FLEX PV fastening system for standing seams metal roofs is a frame system for mounting PV modules.
It is designed exclusively for the installation of PV modules.
Any other use in this regard is considered misuse of the product. Observance of the information in these installation guidelines in particular, is prerequisite for intended use. S:FLEX GmbH accepts no liability for damage resulting from non-observance of the installation guide or from misuse or incorrect use of the product.

1.2 About this document

The S:FLEX PV fastening system for standing seams metal roofs enables the installation of PV systems parallel to the roof.
This installation guideline describes installation with clamps for standing seams and rails.
The following roof coverings may be suitable for this purpose:

- Standing seam
- Double standing seam
- Angled standing seam
- Round seam (e.g. Kalzip, Bemo)
- Industrial metal roof systems (e.g. Domico, Klip Lok)

The prerequisite is the general system-independent approval of the roof manufacturer for fastening the PV system to the roof covering.

Direct mounting on copper roofs is not possible (see 1.4 General information - Standards and guidelines).

It must be ensured that only current and complete installation guides are used for the installation process.

These installation guidelines provide exemplary instructions for installation using the S:FLEX clamp for standing seam 2.1.

© S:FLEX GmbH 04/2024 Subject to technical modifications

1.3 Warnings

The warning texts provided in these installation guidelines relay safety-related information.
They are:



Unless observed, there is a major risk of injury as well as a risk of death.



Failure to observe this may lead to property damage.

1.4 General information - Standards and guidelines

Every photovoltaic system must be installed in accordance with the instructions stipulated in the installation guidelines provided and the project report.
These installation guidelines are based on state-of-the-art technology and many years of experience of installing our systems on site. It must be ensured that only the current and complete installation guidelines are used for the installation, and that a print-out of the installation guidelines is stored in the immediate vicinity of the system. Subject to technical changes.

The project report is part of the installation instructions and is created on a project-specific basis. All of the information given in the project report must be strictly observed. The location-based static calculations are carried out in the project report. The S:FLEX FLAT mounting system must be designed and created with the S:FLEX software (Solar.Pro.Tool).

Since individual project-specific features must be considered with every roof, an expert clarification must always be carried out prior to installation. Before installation, the PV system creator must ensure that the existing roofing and roof substructure are suitable for the occurring additional loads. The condition of the roof substructure, the quality of the roof covering and the maximum load-bearing capacity of the roof construction must be checked by the system creator. Contact a local structural engineer for this purpose.

Direct mounting of the aluminium clamps on copper roofs is not permitted. There is a risk of contact corrosion. The aluminium clamps will be destroyed in the medium term. This endangers the permanently secure mounting of the PV system.
In the case of copper roofing, contact S:FLEX. We can provide you with suitable solutions for your project.

When installing the PV system, always comply with the module manufacturer's installation instructions. In particular, it is necessary to check that the module manufacturer's instructions regarding the module clamping guidelines (module clamping surface and clamping range) are complied with. If this is not the case, the customer must obtain a declaration of consent from the module manufacturer before the installation, or the mounting system must be adjusted according to the module manufacturer's guidelines.

© S:FLEX GmbH 04/2024/ Subject to technical modifications

The requirements for the protection of PV mounting systems against lightning and surges must be met in accordance with the DIN and VDE regulations. The specifications of the relevant power supply company must be observed.

Care must be taken that the PV system to be installed does not impair the functioning of the existing lightning protection system. It is also important to ensure that the PV system is designed so that it can be included in the protection zone of the building's lightning protection system. The separation distances between the PV system and the lightning protection system specified in the relevant regulations must be adhered to. During installation, local fire regulations must be observed, e.g. firewalls must not built over and a certain distance must be observed.

If the roofing is altered, the manufacturer's guidelines must be observed. During and after the installation, the frame components may not be stepped on or be used as a climbing aid. There is a risk of falling and the roofing underneath could be damaged.

Prior to installation, the creator of the photovoltaic system is to ensure that the installation is carried out while strictly adhering to national and location-specific building regulations, safety and accident prevention regulations, standards and environmental protection regulations.

Every person who installs the S:FLEX PV mounting systems is obligated to independently inform himself/herself of all rules and regulations for a professionally correct planning and installation and to adhere to said rules and regulations during the installation. This also includes compliance with the current state of the rules and regulations.
The installation of the PV system may only be carried out by trained specialists.



All system components must be checked for damage before installation.
Damaged components must not be used!



The installation of the S:FLEX substructure and the PV system may only be carried out by trained specialists. System components must not be used as step ladders. The modules must not be stepped on. When working on roofs, there is a risk of falling off and falling through roofs. A fall can result in injury or death. Ensure that appropriate safe access equipment and fall protection (e.g. scaffolding) are provided as well as protection from falling parts.



Check the building statics and construction/condition of the roof substructure before starting the installation. During installation, the instructions in the installation guidelines and project report must be strictly observed. Failure to observe the installation guidelines and the project report may result in damage to the PV system and to the building.



Do not mount aluminium clamps directly on copper roofs!
The aluminium clamps are destroyed by contact corrosion.
This endangers the permanent secure mounting of the PV system.

© S:FLEX GmbH 04/2024 Subject to technical modifications

1.5 Description of the system

The S:FLEX clamps for standing seams offer suitable solutions for various requirements:

System properties clamp for standing seam 2.1

Application:	Standing seam, angled standing seam, double standing seam, round seam, industrial metal roof systems
Module type:	framed modules, with mounting rail also frameless
Module orientation:	Vertical / horizontal
Roof inclination:	max. 75°
Module field length:	maximum 3 modules in a compound with a maximum module width of 1.15m
Max. load:	5.4 kN/m²
Connection:	Non-penetrative
Material:	Aluminium EN AW-6063 / T6, stainless steel
Colour:	Natural aluminium

System properties clamp for standing seam CL

Application:	Industrial metal roof systems, such as Klip-Lok 700, Saflok410, Domitec
Module type:	framed modules, with mounting rail also frameless
Module orientation:	Vertical / horizontal
Roof inclination:	max. 75°
Module field length:	maximum 3 modules in a compound with a maximum module width of 1.15m
Max. load:	5.4 kN/m²
Connection:	Non-penetrative
Material:	Aluminium EN AW-6063 / T6, stainless steel
Colour:	Natural aluminium

System properties clamp for standing seam DCO

Application:	Industrial metal roof systems, such as Saflok700, Klip-Lok 406, Domico, GBS, Ribroof 465
Module type:	framed modules, with mounting rail also frameless
Module orientation:	Vertical / horizontal
Roof inclination:	max. 75°
Module field length:	maximum 3 modules in a compound with a maximum module width of 1.15m
Max. load:	5.4 kN/m²
Connection:	Non-penetrative
Material:	Aluminium EN AW-6063 / T6, stainless steel
Colour:	Natural aluminium



The module manufacturer's installation instructions must always be observed. All specifications of the roof manufacturer for installation on the roof cover must be observed.

© S:FLEX GmbH 04/2024/ Subject to technical modifications

2.1 System components

(1) Roof hooks

Clamp for standing seam 2.1



Clamp for standing seam CL



Clamp for standing seam DCO



(2) Mounting rails

ST-AK 5/40



ST-AK 7/47



ST-AK 13/60



ST-AK 26/70



(3) Splices

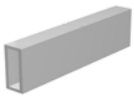
Splice 5



Splice 7



Splice 13



Splice 26



(4) End clamp

EH AK II Klick 30-50



EH AK II Klick 30-50 black



(5) Mid clamp

MH AK II Klick 30-50 A



MH AK II Klick 30-50 black



(6) Cross adapter

Cross adapter AK



MH AK II Klick 30-50 w grounding plate



(7) Covering caps

Covering cap 5



Covering cap 7



Covering cap 13



Covering cap 26



(8) Slipping protection set

Slipping protection set



(9) Locking clips

Slider lock XL AK A



(10) Cable clips (optional)

Cable clip edge clip KC 15



© S:FLEX GmbH 04/2024 Subject to technical modifications

2.2 Direct roof fastening using clamp

For coverings with standing seam sheets, S:FLEX components which can be clamped directly onto the roof covering can be used for the roof fastening. These connections are possible for pitched roofs with a roof inclination up to a max. 75°. Approval of the manufacturer is required for installation on the roof covering.
It should be ensured when installing the clamps for standing seams that they are fitted in sufficient quantity that forces are reliably transferred in the roofing and the underlying structure, as well as guaranteeing optimum sealing of the roofing.

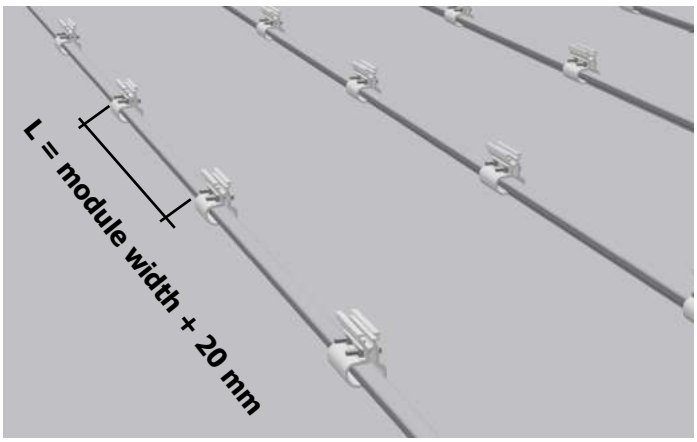
Before installing the PV system directly onto the roofing, suitability of the roofing should be check on site. This applies in particular to static load-bearing capacity of the roofing and connection of the roofing to the substructure (type, number and position of fixings/connecting points).

2.3 Assembly for direct module installation

Generally applicable installation instructions are illustrated in the example for clamps for standing seam 2.1.
Special installation specifications for the various clamps and roof covers can be obtained on pages 9-11.

Installation - 1 (positioning as bottom layer)

Positioning of the clamps for standing seams must be determined in accordance with the structural requirements of the site and the respective installation situation. In this regard, it should be ensured once more that the measurements taken as a basis during planning correlate with the actual measurements found on the roof (if necessary, adjustments must be made). Thus, the position of the clamps for standing seams must be checked against the modules' prescribed clamping distances.
Spacing of the clamps for standing seams in the roof inclination direction is L = module width + 20 mm (see Fig.)
Spacing of the clamps for standing seams parallel to the eave is dependent upon the spacings of the standing seams. Consequently, it may not always be possible to comply with the clamping ranges prescribed as standard by the module manufacturer. In this case, approval must be obtained from the module manufacturer.





Check planning basis. Connection possible with up to 75° roof inclination. Spacing of clamp for standing seams in roof inclination direction L=module width + 20 mm.

Position according to structural requirements and respective installation situation

Alignment of clamps for standing seams using a string line

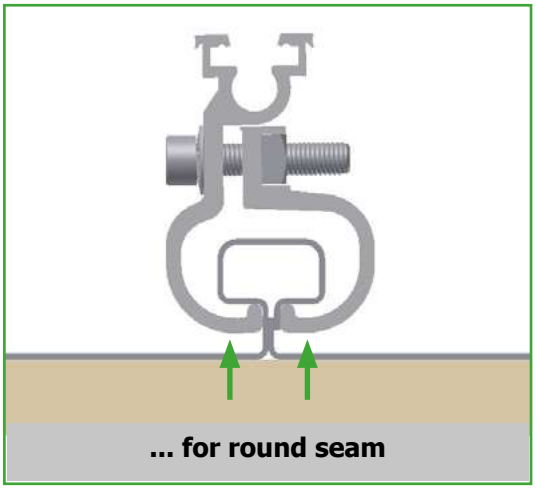
© S:FLEX GmbH 04/2024/ Subject to technical modifications

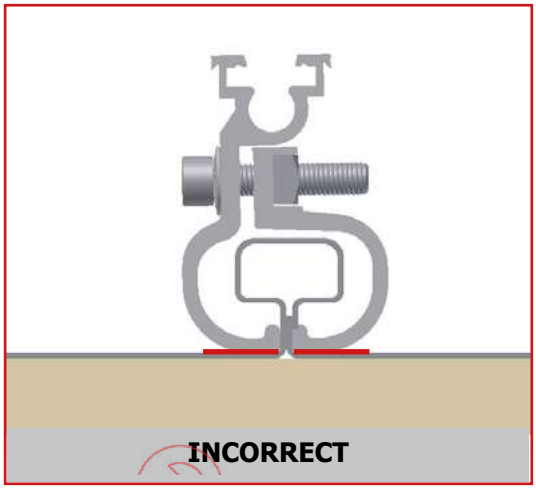
All specifications of the roof manufacturer for installation on the roofing must be observed.
For roof sheeting inserted by sliding, the clamps for standing seams may not be installed in the area of the fixings (or any other fastenings of the roofing to the substructure) as this could impair vertical thermal expansion of the roof sheeting.

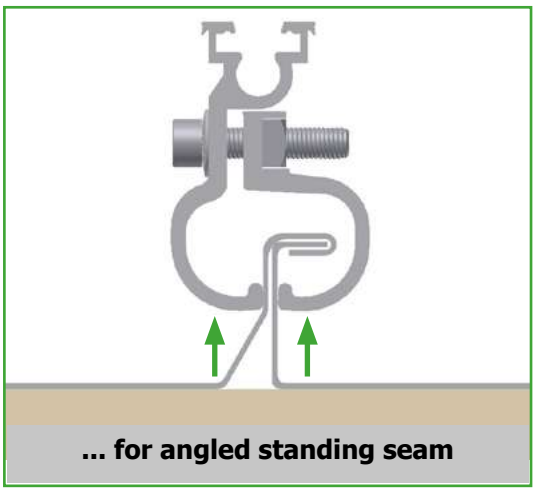
When installing the clamps for standing seams, it should always be ensured that thermal expansion of the roof is guaranteed in both vertical and horizontal directions. Fixing of the roofing with clamps for standing seams can lead to the occurrence of cracks in the sheet and cause damage to the building and to the PV system.

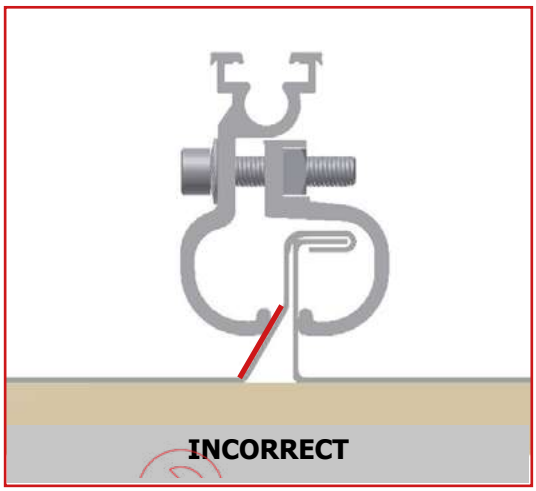
Installation of clamp for standing seam 2.1

When installing the clamps for standing seams, check compatibility of the materials for clamps and roofing. It should be ensured that the clamps for standing seams fit snugly on the seam (check the inner jaw size of the clamps) and are properly engaged.

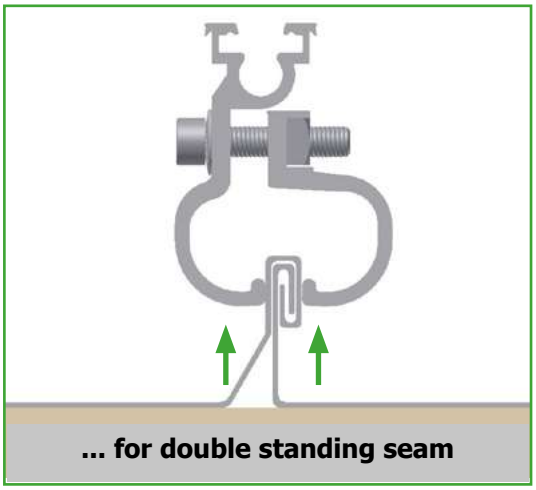


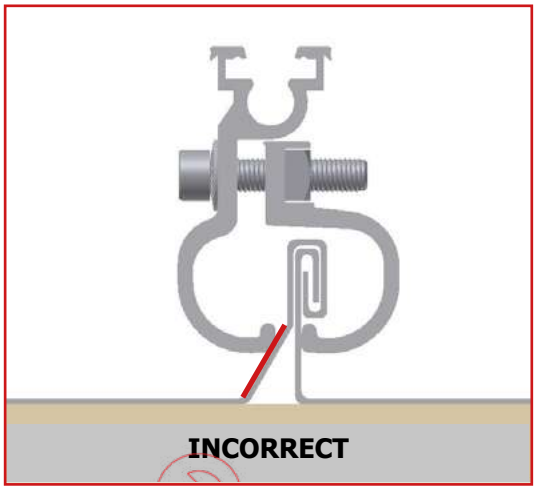




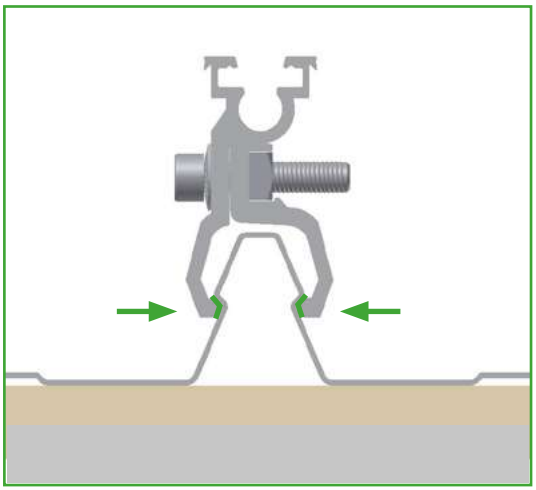


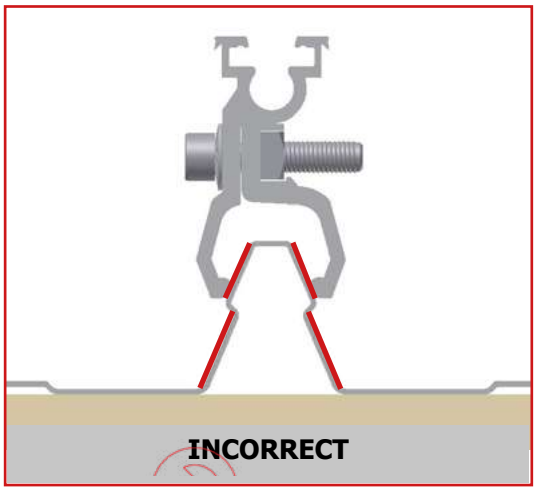
© S:FLEX GmbH 04/2024 Subject to technical modifications



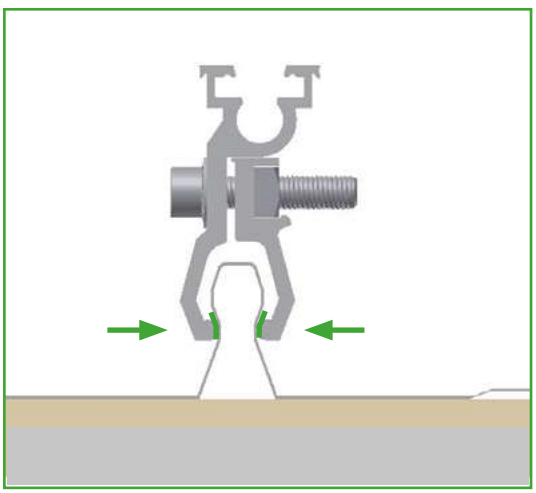


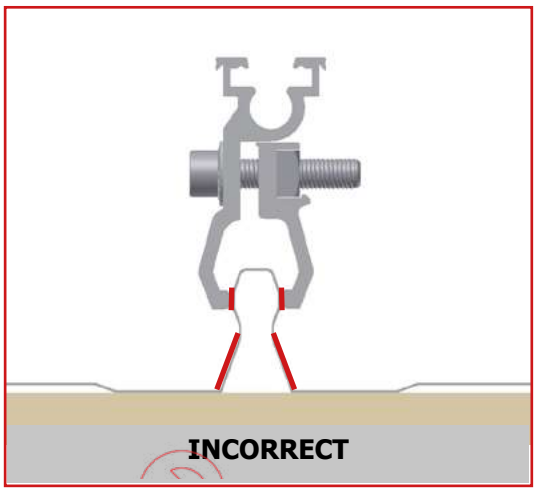
Installation of clamp for standing seam CL





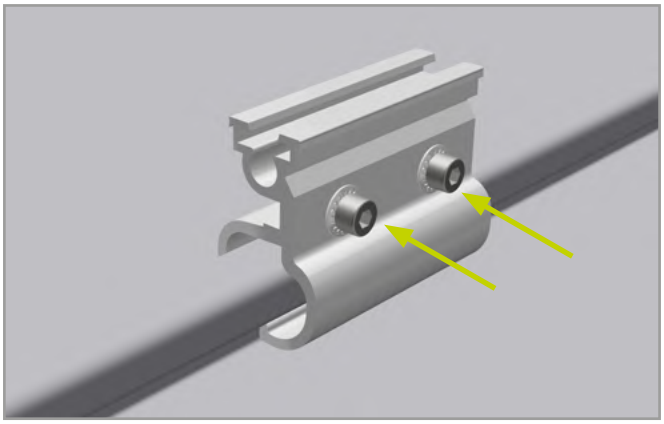
Installation of clamp for standing seam DCO





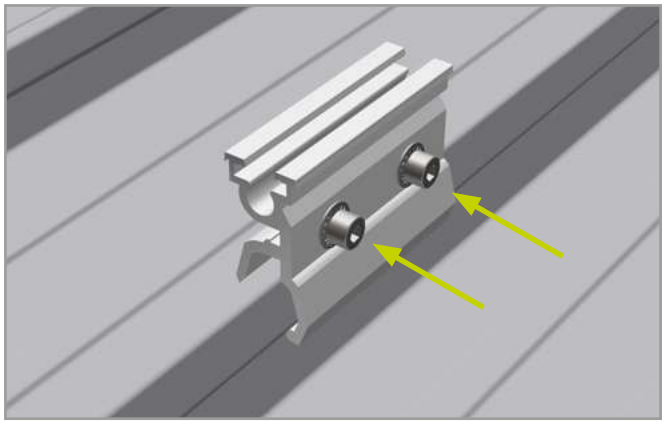
© S:FLEX GmbH 04/2024/ Subject to technical modifications

Installing the clamps for standing seams.



Clamp for standing seam 2.1

Once in the final position, tighten the screws uniformly (tightening torque 15 Nm).



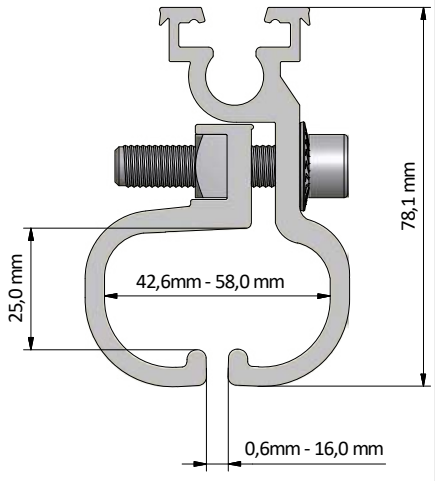
Clamp for standing seam CL/ DCO

Tighten the screws uniformly. It should be ensured that both fasteners exhibit a tightening torque of 15 Nm. It is recommended that the screws are tightened alternately and the tightening torque checked separately.

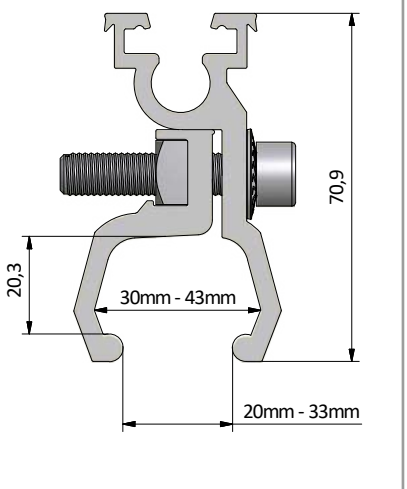
Install the clamps for standing seams (tightening torque 15 Nm) – Number of structural requirements

Check range of application for clamps for standing seams (refer to Fig. for seam geometry)

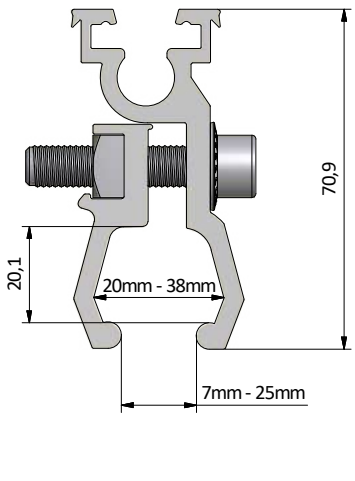
6



Seam geometry
Clamp for standing seam 2.1



Seam geometry
Clamp for standing seam CL

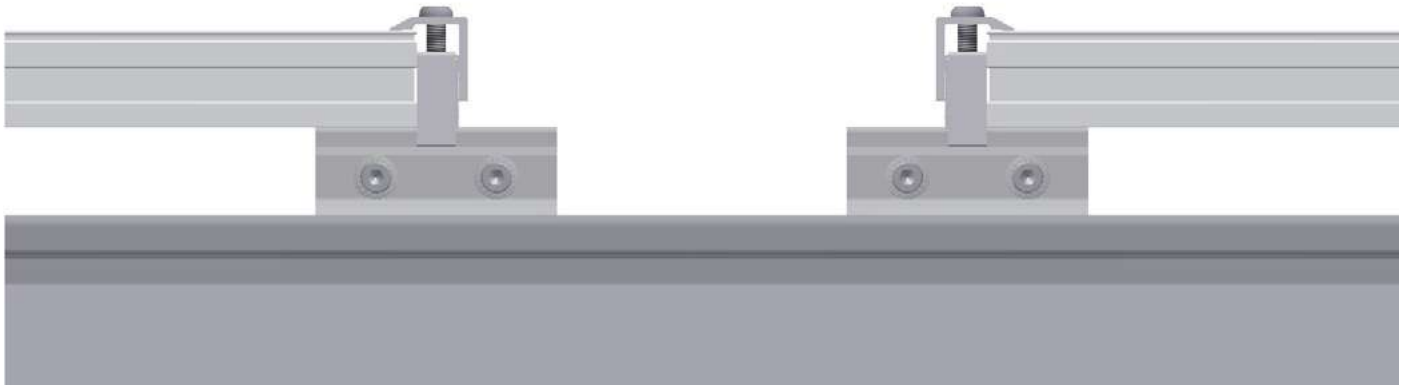


Seam geometry
Clamp for standing seam DCO

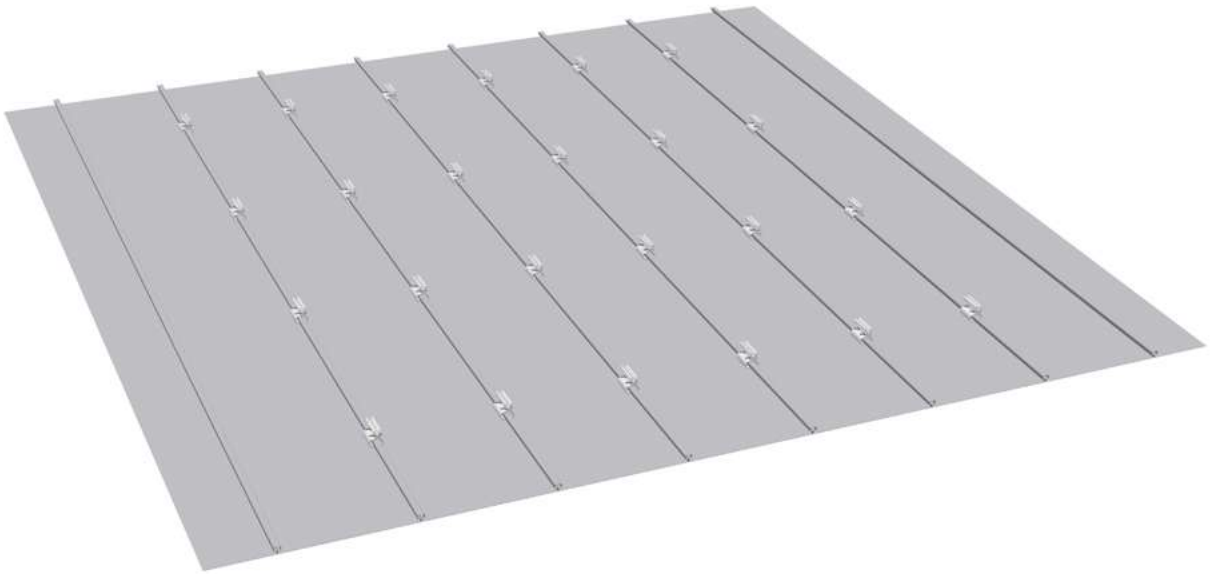
© S:FLEX GmbH 04/2024 Subject to technical modifications

If the module array is longer than 4m vertical to the eave with single-layer substructure, this must be separated by fitting a clamp for standing seams with end clamp.
Arrangement of the expansion joints is to be adapted in accordance with the structural conditions of the roof and the various expansion properties of the materials. The instructions in the Installation - 2 section of this installation guideline must also be observed for fitting of the end clamp.

Modules must not be built over expansion joints.
There is no connection to earth. This is to be established without restricting the effect of the expansion joint.



Completed installation of the clamps for standing seams.

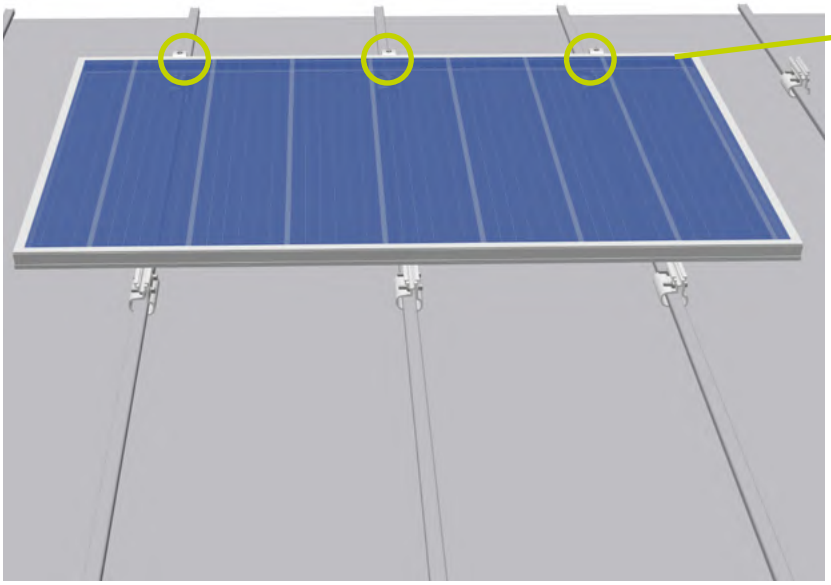


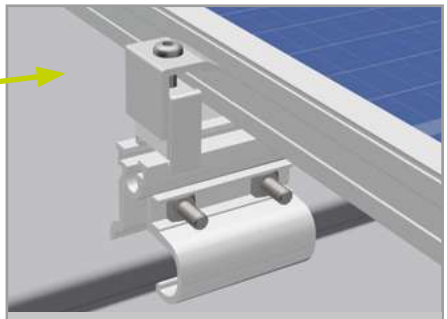
Column by column installation of the modules from the top down is described as follows.
Installation may also be carried out from the bottom up should this be required for the respective installation site, and if permissible for the installation situation.

© S:FLEX GmbH 04/2024/ Subject to technical modifications

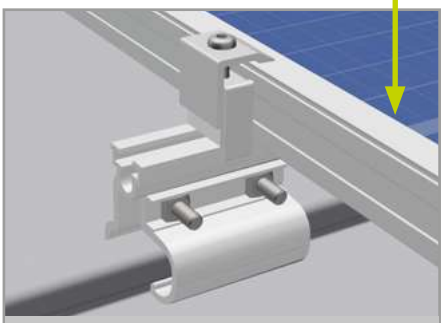
Installation – 2 (module installation, end clamp)

Lay the module onto the clamps for standing seams ensuring an even clearance over the clamps.
Install the end clamps. To do this, click the end clamp onto the clamp for standing seams and push it onto the module. Ensure that the end clamp is clicked in on both sides of the clamp for standing seams. Ensure that the end clamp is clicked into place on both sides of the module field and is flush with the module. Now adjust the end clamp to match the height of the module and tighten the screw (tightening torque 8-10 Nm). Ensure that the end clamp clamps the module frame over the clamping area defined by the module manufacturer.





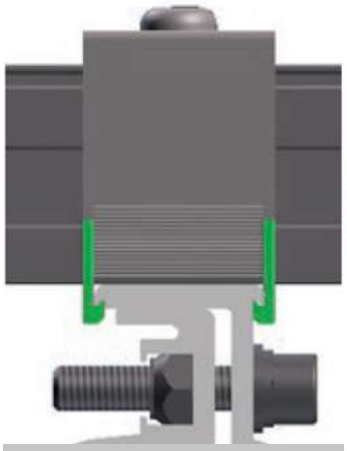
Click on the end clamp...



Push in and tighten

Install end clamp

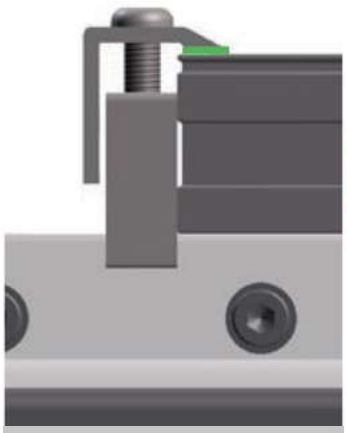




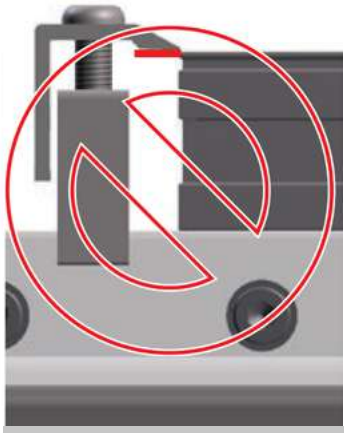
Both sides clicked in



INCORRECT



Defined clamping area



INCORRECT

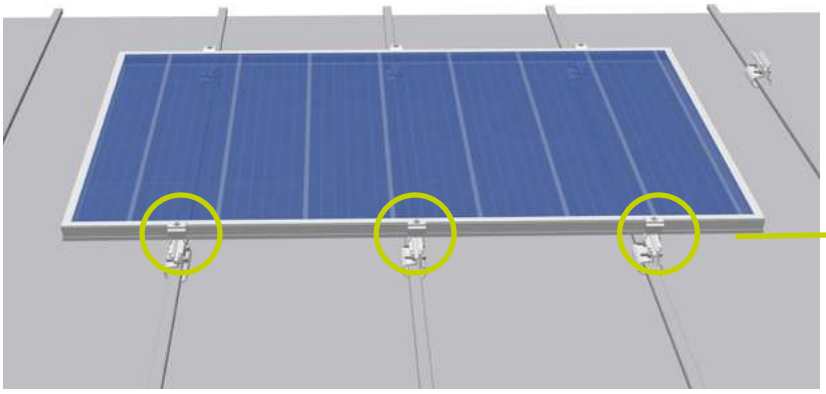
End clamps are approved for one-time installation. Check the end clamp has been clicked in

Observe the module manufacturer's instructions: Check the defined clamping area

© S:FLEX GmbH 04/2024 Subject to technical modifications

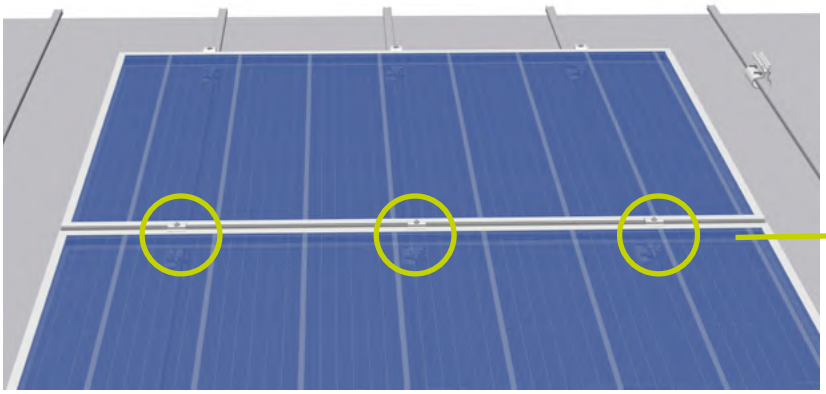
Installation – 3 (module installation, mid clamp)

Now install the mid clamps. To do this, click the mid clamp onto the clamp for standing seams and push it flush onto the module.. Ensure that the mid clamp is clicked in on both sides of the clamp for standing seams.



Click mid clamp and push in

Now push the next module under the mid clamp, adjust the mid clamp to the height of the module frame and tighten the screw (torque 8-10 Nm).



Slide module underneath and tighten module clamp

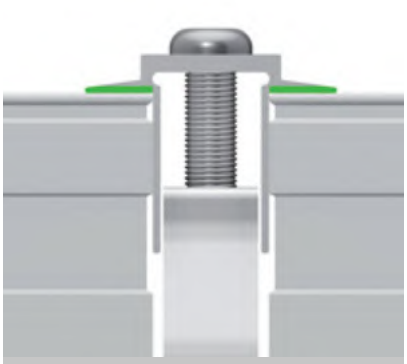


Install mid clamp



© S:FLEX GmbH 04/2024/ Subject to technical modifications

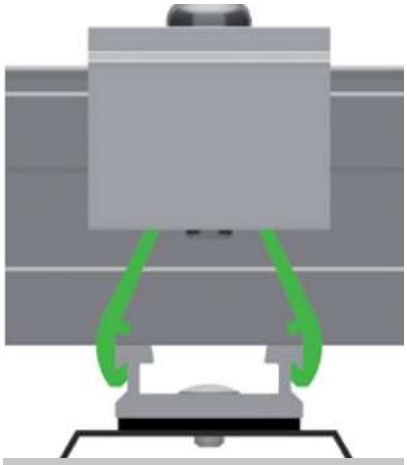
Ensure that the mid clamp clamps both of the module frames at the clamping area defined by the module manufacturer.



Defined clamping area



INCORRECT



Both sides clicked in



INCORRECT

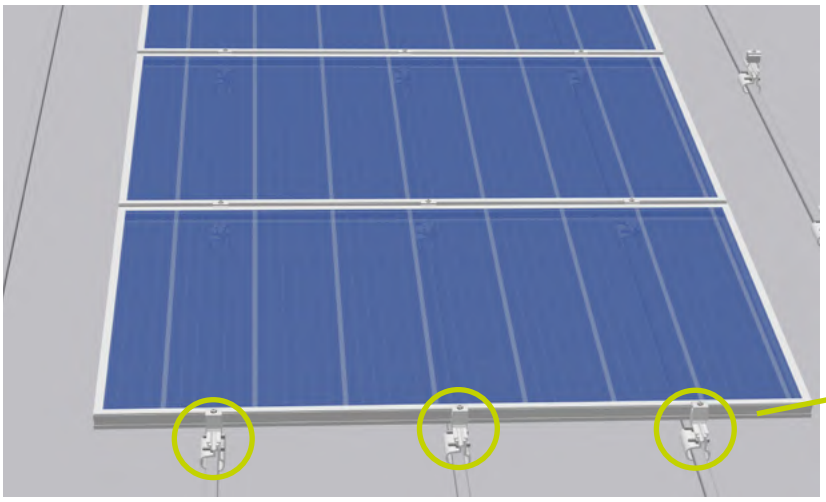
Mid clamps are approved for one-time installation. Check the end clamp has been clicked in

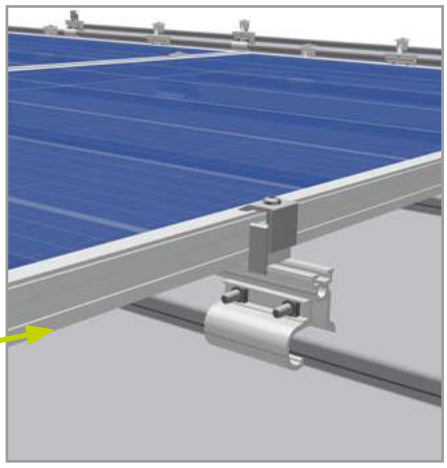
**Observe the module manufacturer's instructions:
Check the defined clamping area**

© S:FLEX GmbH 04/2024 Subject to technical modifications

Installation – 4 (module installation, slipping protection)

End clamps must be installed once again on the last module in each row (if applicable, on expansion joints), with additional Slider lock XL AK A as Slipping protection if the roof inclination is greater than 5°. To do this, click the end clamp onto the clamp for standing seams and push it onto the module. Ensure that the end clamp is engaged on both sides of the clamp for standing seams.
Now adjust the end clamp to match the height of the module and tighten the screw (tightening torque 8-10 Nm).
Ensure that the end clamp clamps the module frame over the clamping area defined by the module manufacturer (refer to Installation-2).





Install an end clamp on the last module with an additional Slider lock XL AK A as Slipping protection if the roof inclination is greater than 5°.



Proceed as described for the following rows.
It should be ensured here that all end clamps are secured in a horizontal line.

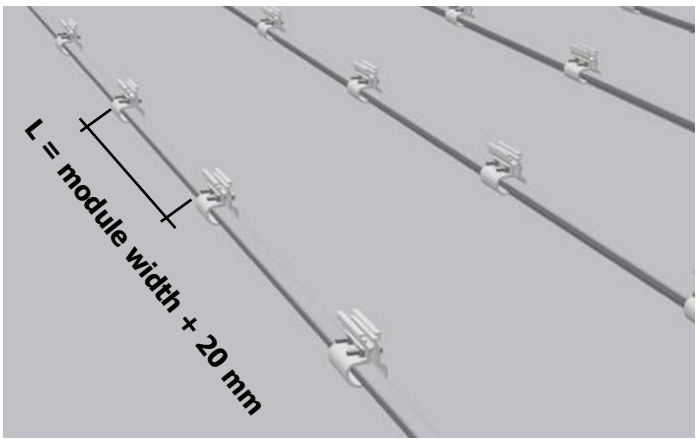


© S:FLEX GmbH 04/2024/ Subject to technical modifications

2.4 Installation - single layer substructure

Installation - 1 (positioning of clamps for standing seams)

Positioning of the clamps for standing seams must be determined in accordance with the structural requirements of the site and the respective installation situation. In this regard, it should be ensured once more that the measurements taken as a basis during planning correlate with the actual measurements found on the roof (if necessary, adjustments must be made). Thus, the position of the clamps for standing seams must be checked against the modules' prescribed clamping distances.
Spacing of the clamps for standing seams in the roof inclination direction is L = module width + 20 mm (see Fig.)





Check planning basis. Connection possible with up to 10° roof inclination. Spacing of clamp for standing seams in roof inclination direction L=module width + 20 mm.

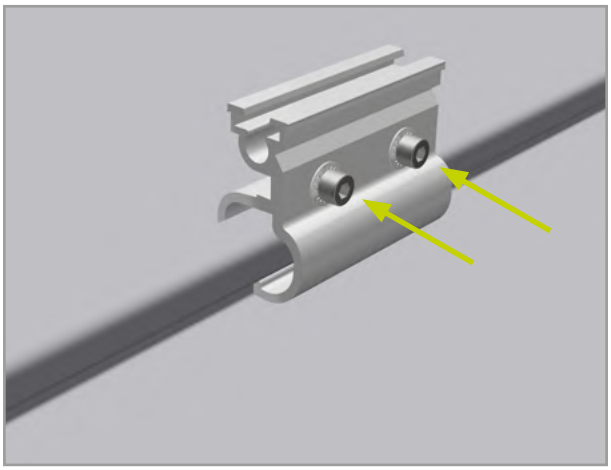
Position according to structural requirements and respective installation situation

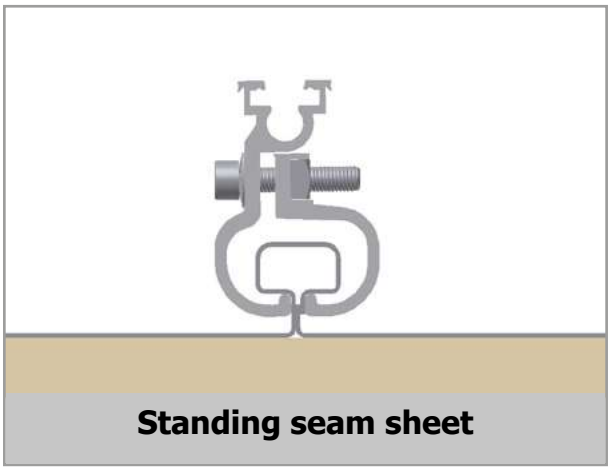
Alignment of clamps for standing seams using a string line

© S:FLEX GmbH 04/2024 Subject to technical modifications

Installation single layer with framed PV modules in vertical installation

When installing the clamps for standing seams, check compatibility of the materials for clamps and roofing. It should be ensured that the clamps for standing seams fit snugly on the seam (check the inner jaw size of the clamps) and are properly engaged (clamping area: seam thickness 3 to 8 mm). Once in the final position, tighten the screws uniformly (tightening torque 15 Nm). An EPDM strip is glued onto the underside of the clamps for standing seams to prevent scratching on the roofing during installation.

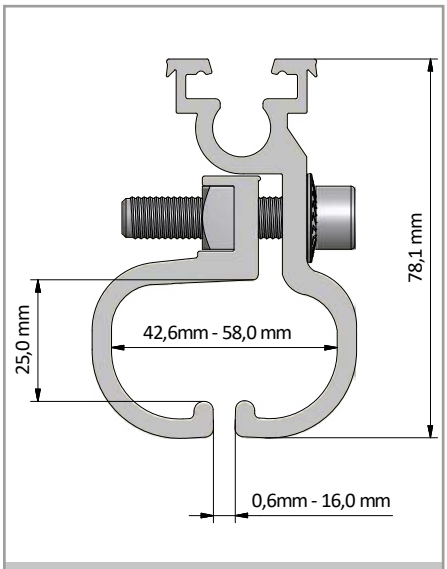




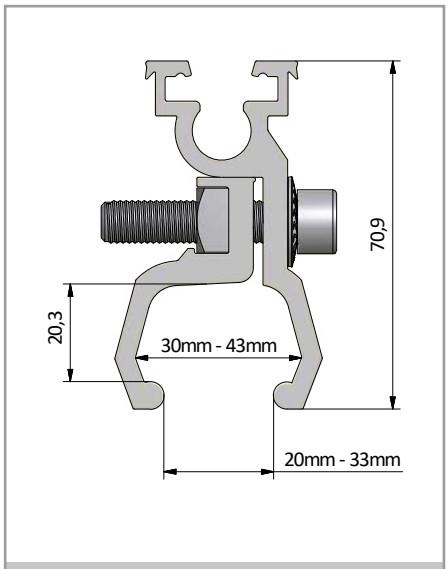


Install the clamps for standing seam (tightening torque 15 Nm) – Number of structural requirements

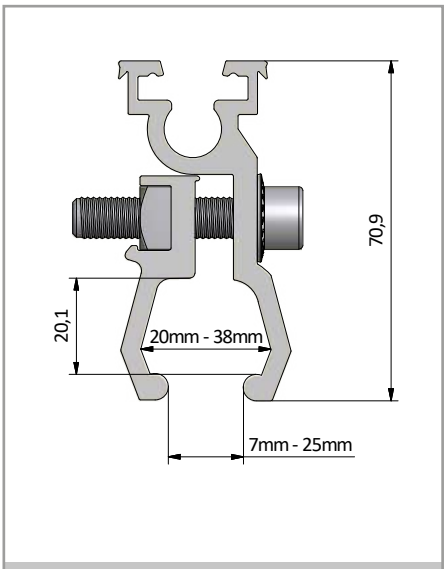
Check range of application for clamps for standing seams (refer to Fig. for seam geometry)



Seam geometry
Clamp for standing seam 2.1



Seam geometry
Clamp for standing seam CL

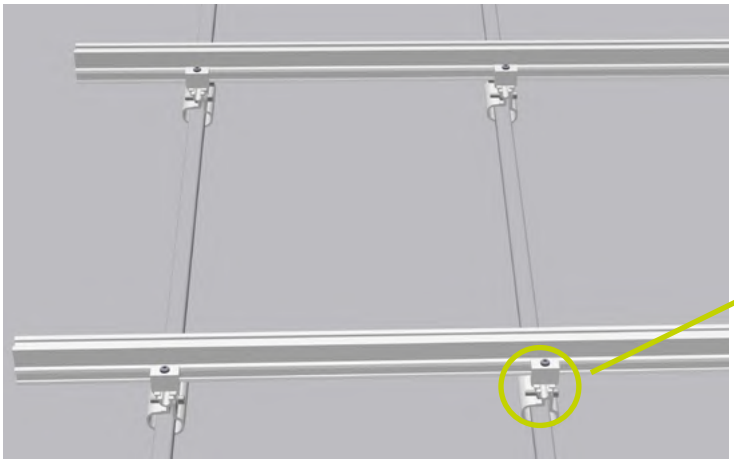


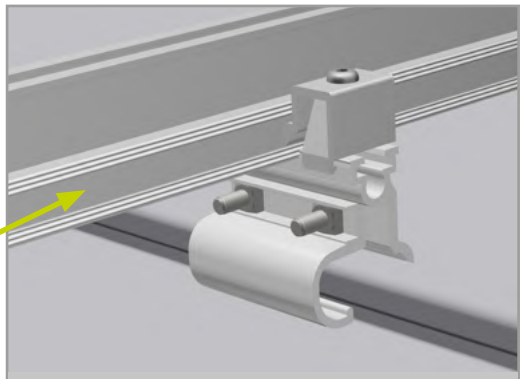
Seam geometry
Clamp for standing seam DCO

© S:FLEX GmbH 04/2024/ Subject to technical modifications

Installation - 2 (installation of top rail layer)

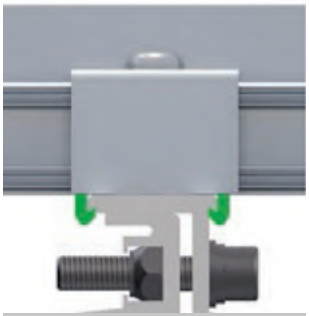
Install the horizontal rails for each module row using cross adapters crossways on the clamps for standing seams. To do this, click the cross adapter onto the clamp for standing seams and use it to secure the horizontal rail. Ensure that the spacing between the horizontal rails is in line with the clamping distances prescribed for the module. Ensure that the cross adapter is clicked in and tighten the screws (tightening torque 8-10 Nm). The number of cross adapters for each fastening point can be obtained from the project report.





Cross adapter





Both sides clicked in



Incorrect

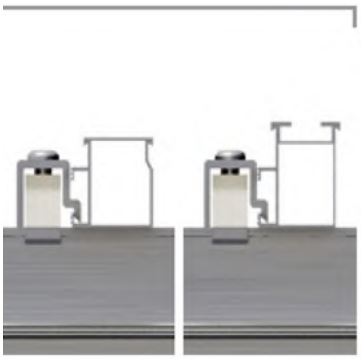
© S:FLEX GmbH 04/2024 Subject to technical modifications

Installation single layer with framed PV modules in vertical installation

Either 1 or 2 cross adapters will be required for each fastening point, depending on the structural requirements of the installation site and the respective installation situation. Should a second cross adapter be necessary, this is secured on the opposite side as described above (tightening torque 8-10 Nm).

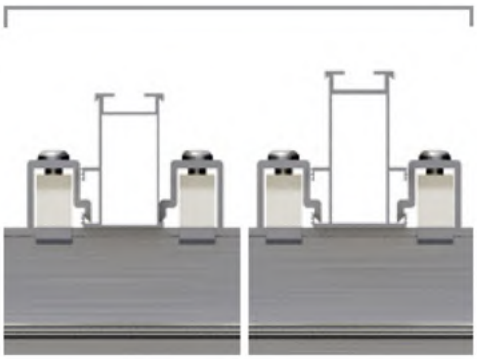
Intersection points:

1 cross adapter in side HKS channel



ST-AK 5/40 **ST-AK 7/47**

1 cross adapter in side HKS channel and 1 cross adapter on the opposite side



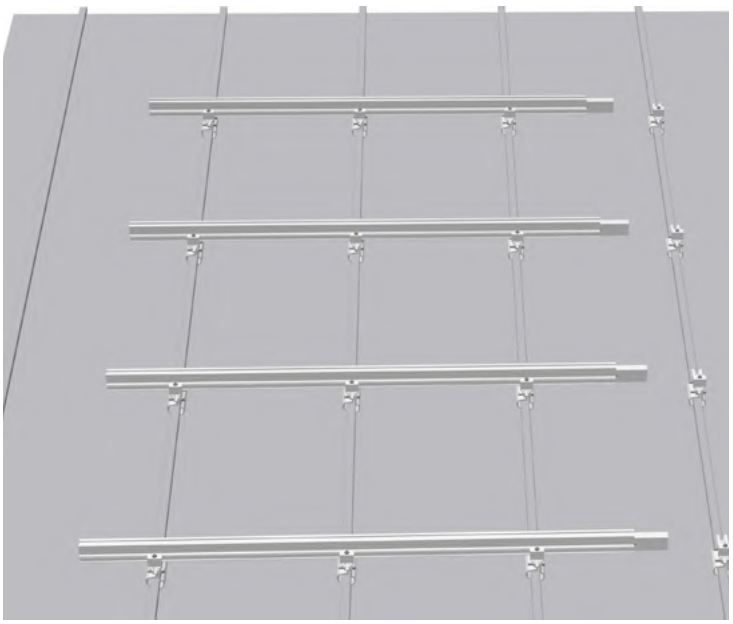
ST-AK 13/60 **ST-AK 26/70**

Specifications for the spacing between the vertical rails can be obtained in the operating instructions.

© S:FLEX GmbH 04/2024/ Subject to technical modifications

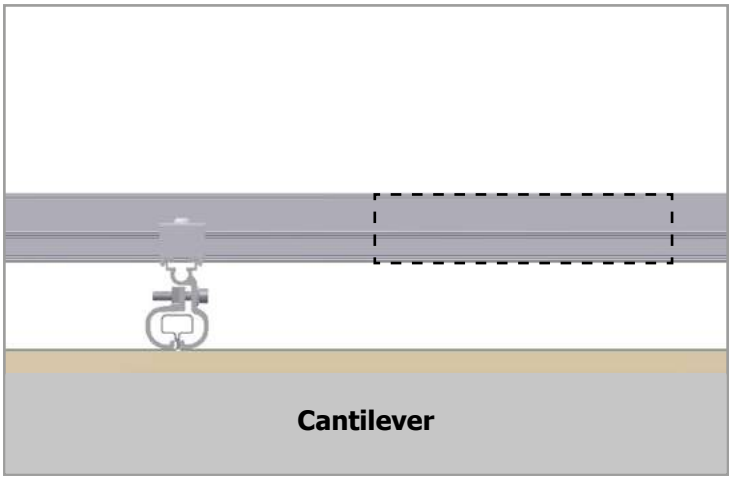
Installation - 3 (splice)

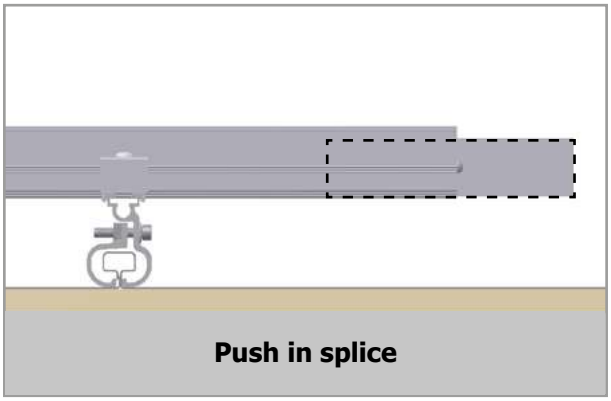
To join several rails together, the splice featuring identical static values as the rail is pushed half its length into the rail already installed. Then push the next rail onto the splice. Apply enough pressure to push the rails flush together and ensure that connection to earth is established. The connection is complete. Fasten the rail which has just been inserted to the clamp for standing seams via cross adapter, as described in Installation - 2.

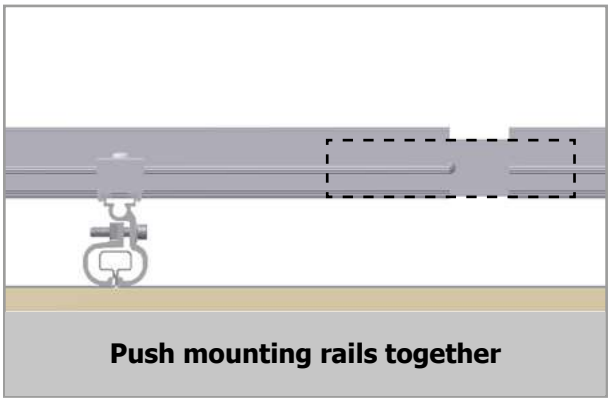


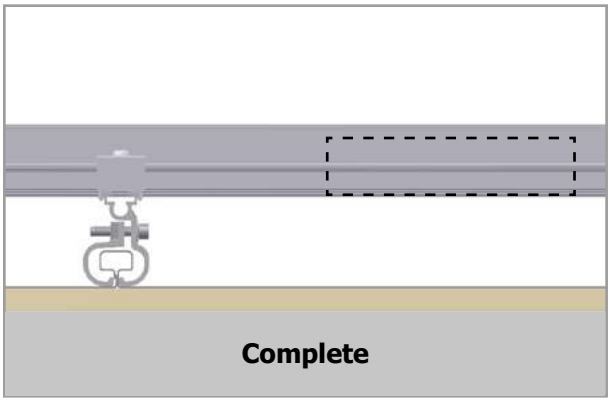
Check connection to earth

No cantilevers with splices.
Position the splice so that it is between 2 clamps for standing seams.







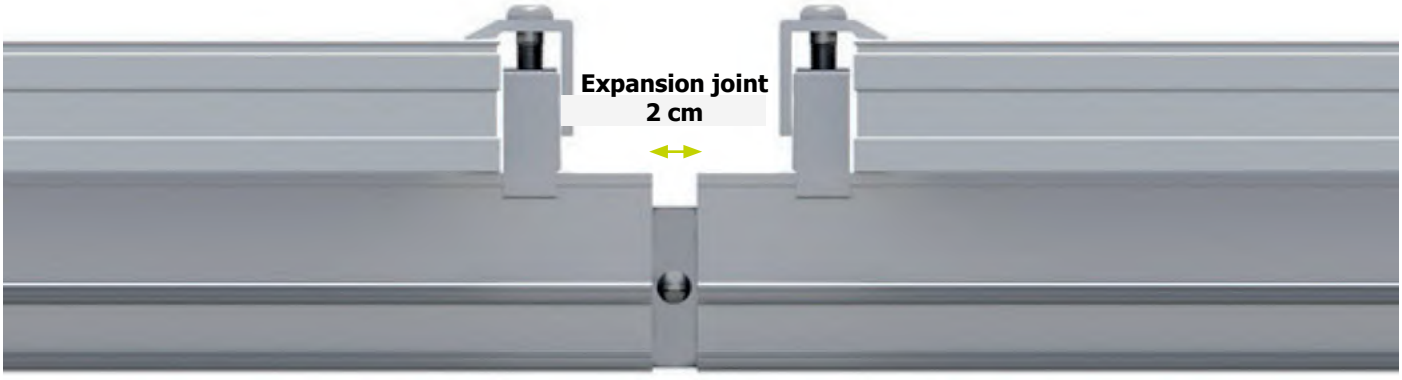


© S:FLEX GmbH 04/2024 Subject to technical modifications

Installation single layer with framed PV modules in vertical installation

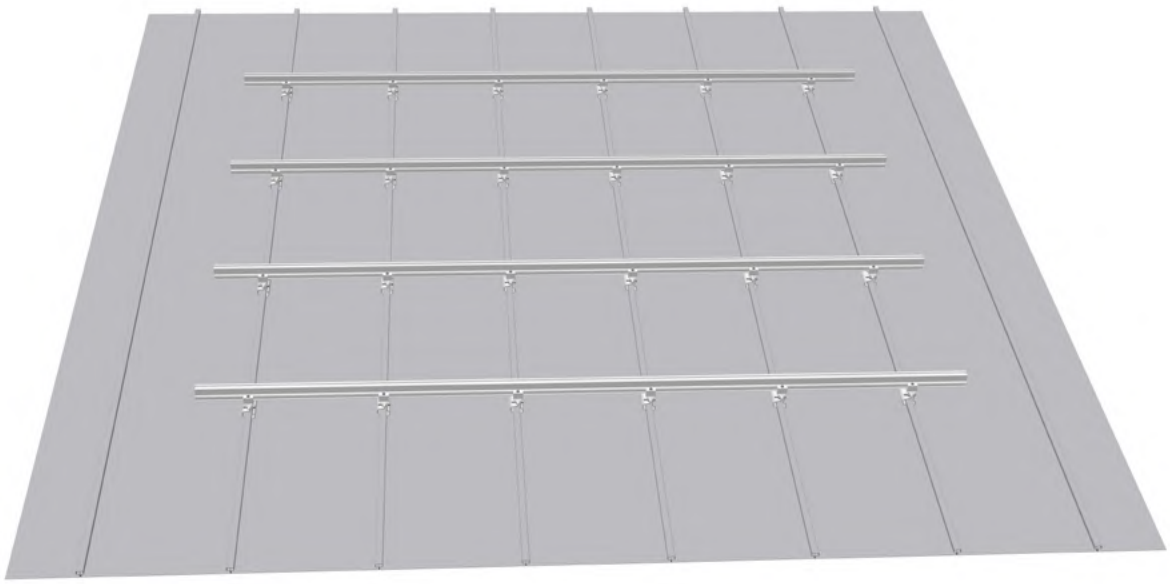
If the module array is longer than 3.15 m longitudinal to the eave, the module array is to be separated by fitting two end clamps. The rail is to be separated in the area between the end clamps and connected with a splice to ensure a 2 cm compensation in length (expansion joint).
Arrangement of the expansion joints is to be adapted in accordance with the structural conditions of the roof and the various expansion properties of the materials. Refer to the instructions in Installation - 5 of this installation guideline for fitting of the end clamps.

Modules must not be built over expansion joints.
There is no connection to earth. This is to be established without restricting the effect of the expansion joint.



Expansion joint upper layer

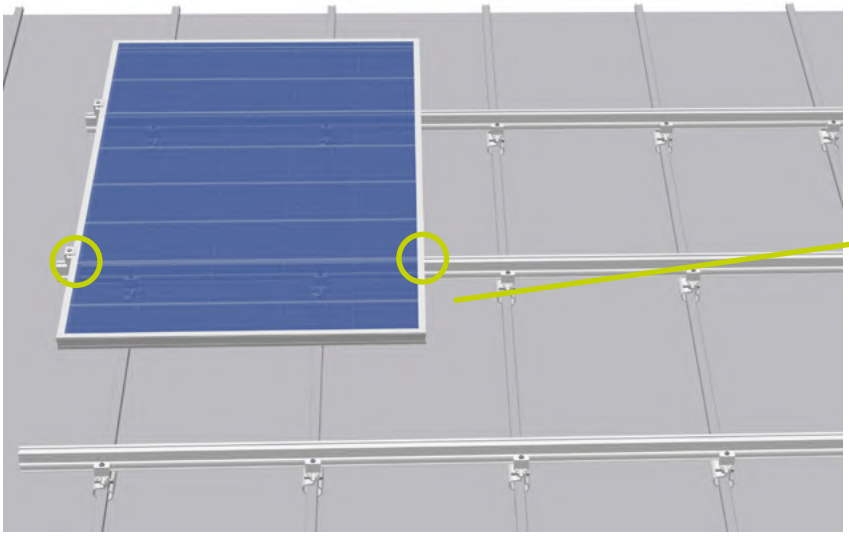
Completed installation of the upper rail layer

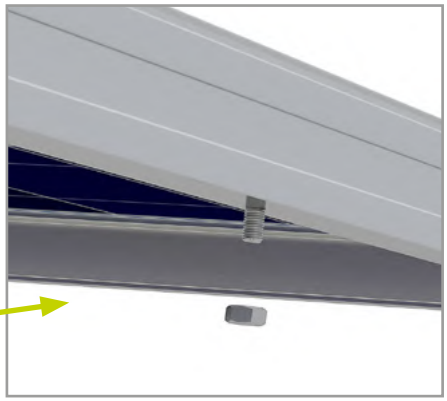


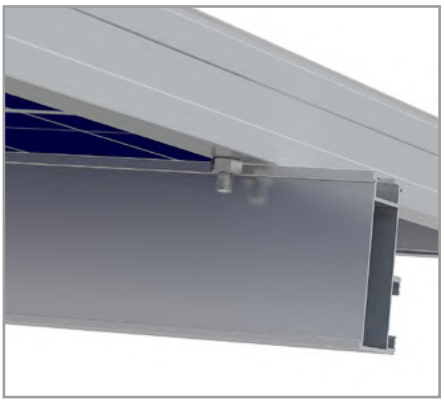
© S:FLEX GmbH 04/2024/ Subject to technical modifications

Installation - 4 (module installation, slipping protection for roof inclination greater than 5°**)**

For roof pitches greater than 5°, before the installation of the modules in the lowest row of modules, the modules are to be equipped with slipping protection. The same applies to modules which do not have any modules directly below them (modules above obstructions such as windows, chimneys, etc.). Fix 2 screws M6 x 20 (with the shank downward) with nuts M6 in 2 of the module's frame holes (8 mm) so that the screws are at the same level and that when installed they are above at least one horizontal mounting rail layer, if necessary so that the screws on the underside of the module frame touch the horizontal mounting rails from above. If the lower fastening borehole is larger than 8 mm, please use a screw appropriate for this.





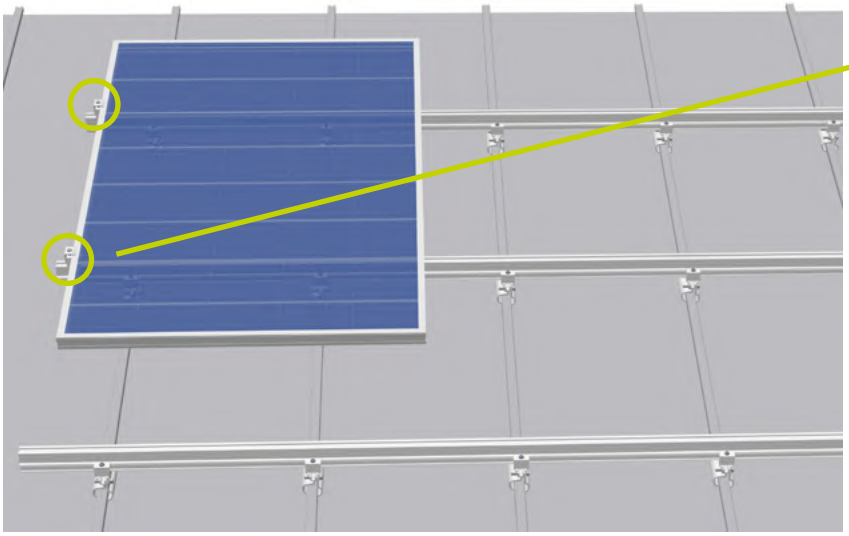


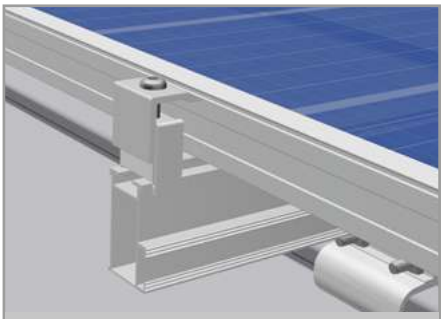


© S:FLEX GmbH 04/2024 Subject to technical modifications

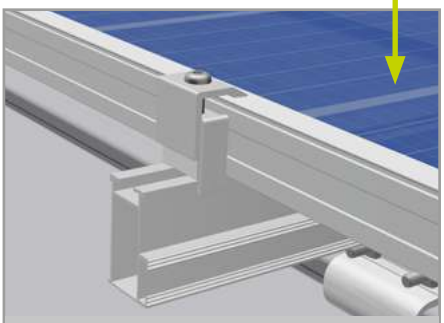
Installation – 2 (module installation, end clamp)

Place the module on the rails. Install the end clamps. Click each end clamp on to the mounting rail and push them on to the module. Ensure that the end clamp is clicked in to both sides of the mounting rail.
Now adjust the end clamp to match the height of the module and tighten the screw (tightening torque 8-10 Nm). Ensure that the end clamp clamps the module frame at the clamping area defined by the module manufacturer.





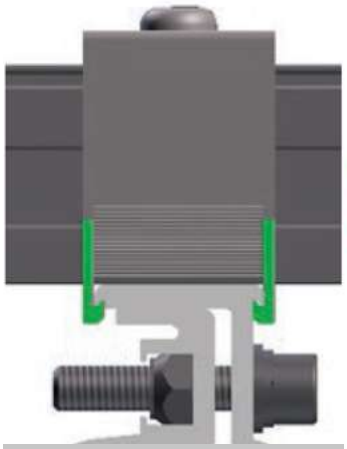
Click on the end clamp...



Push in and tighten

Install the end clamp

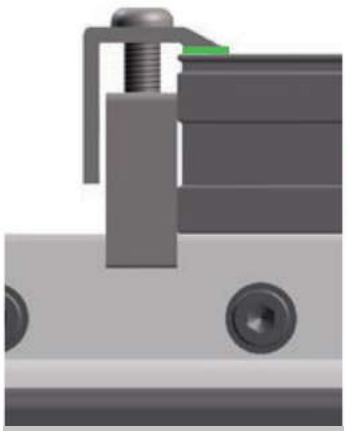




Both sides clicked in



INCORRECT



Defined clamping area



INCORRECT

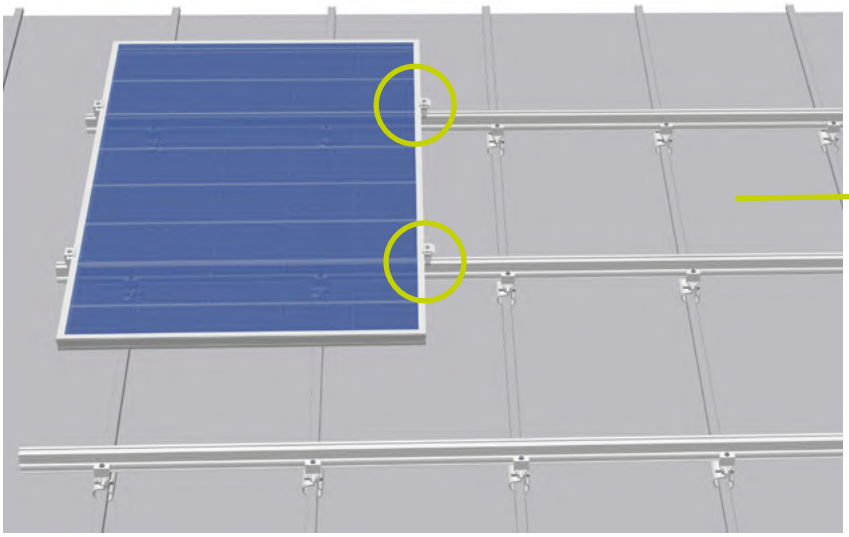
End clamps are approved for one-time installation. Check the end clamp has been clicked in

**Observe the module manufacturer's instructions:
Check the defined clamping area**

© S:FLEX GmbH 04/2024/ Subject to technical modifications

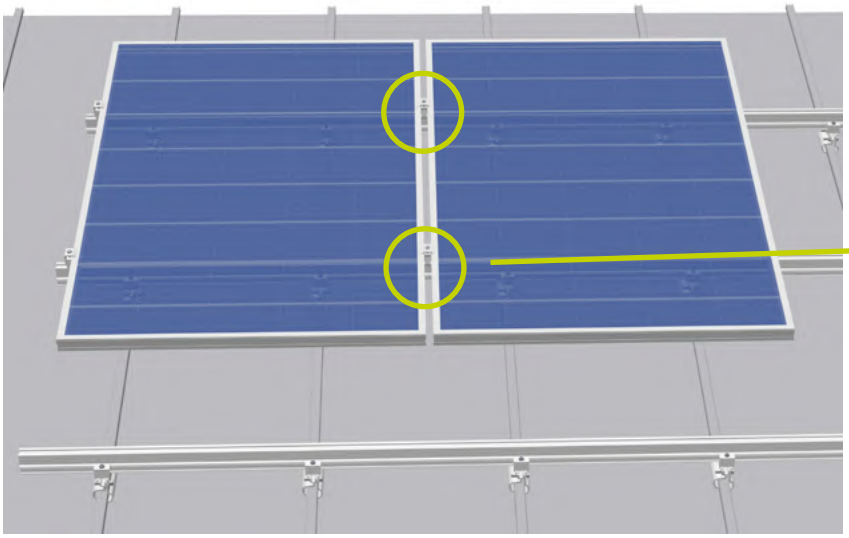
Installation – 6 (module installation, mid clamp)

Now install the mid clamps. Click each mid clamp onto the mounting rail and push them on to the module. Ensure that the mid clamp is clicked in to both sides of the mounting rail.



Click mid clamp and push in

Now push the next module under the mid clamp, adjust the mid clamp to the height of the module frame and tighten the screw (torque 8-10 Nm).



Slide module underneath and tighten module clamp



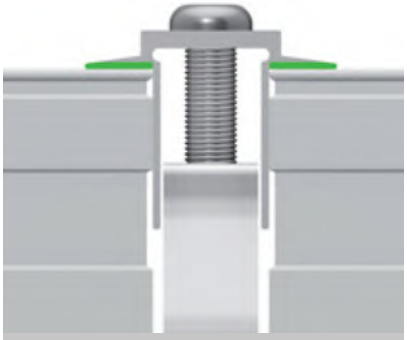
Install mid clamp



© S:FLEX GmbH 04/2024 Subject to technical modifications

Installation single layer with framed PV modules in vertical installation

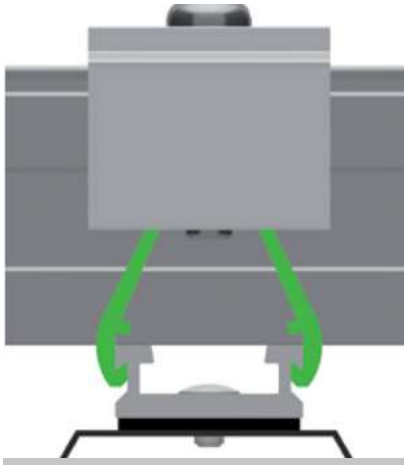
Ensure that the mid clamp clamps both of the module frames at the clamping area defined by the module manufacturer.



Defined clamping area



INCORRECT



Both sides clicked in



INCORRECT

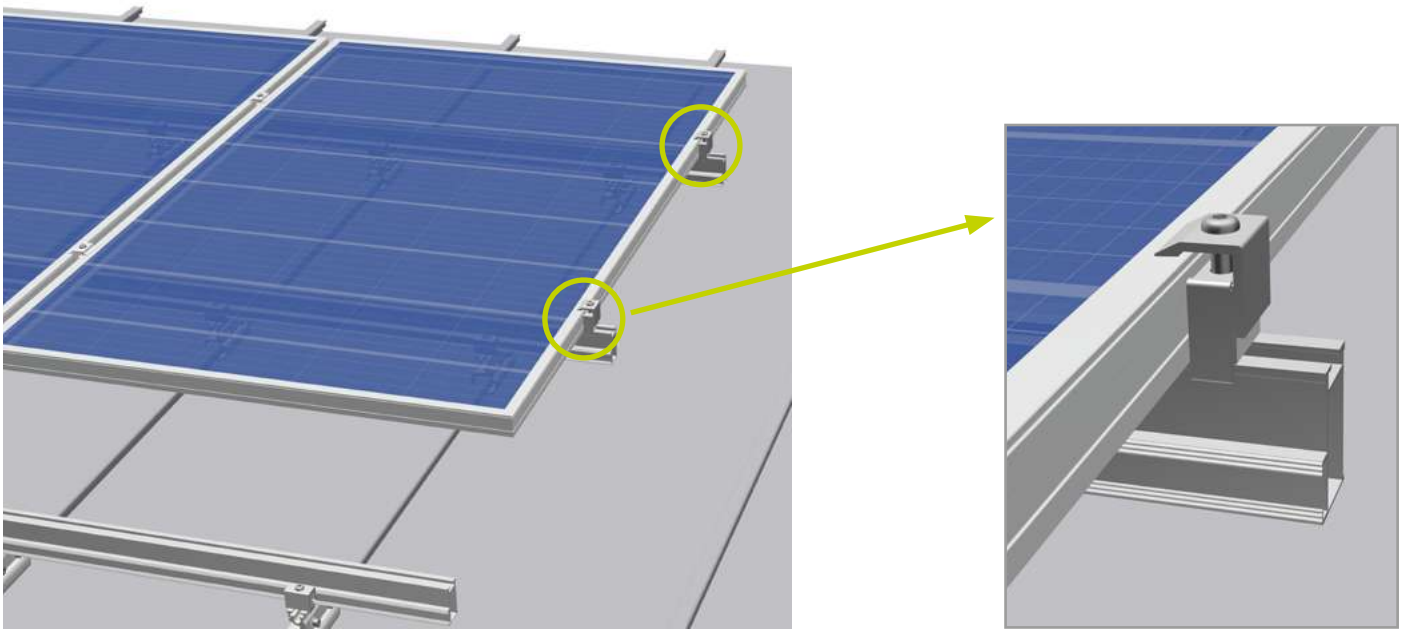
Mid clamps are approved for one-time installation. Check the end clamp has been clicked in

Observe the module manufacturer's instructions: Check the defined clamping area

© S:FLEX GmbH 04/2024/ Subject to technical modifications

Installation – 7 (module installation, end clamp on last section of row)

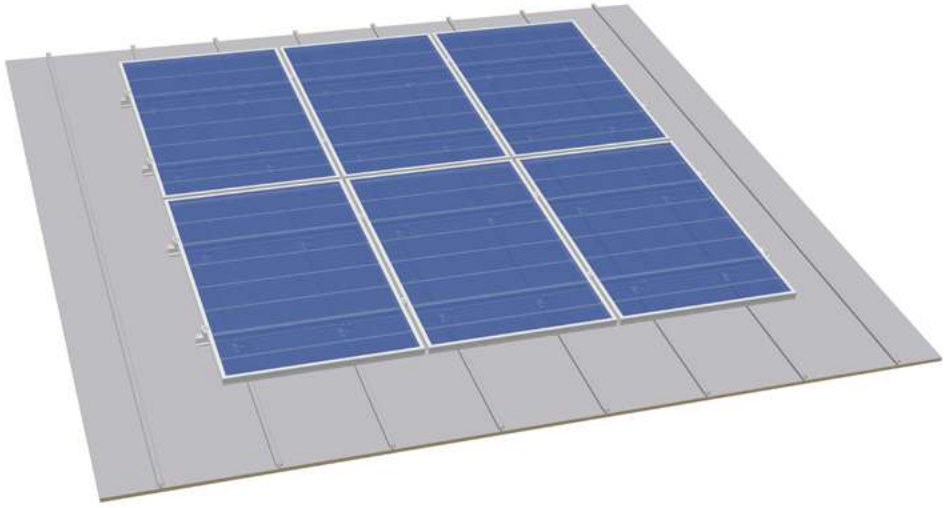
End clamps must be installed on the last module in each row (if applicable, on expansion joints). Click each end clamp on to the mounting rail and push them on to the module. Ensure that the end clamp is clicked in to both sides of the mounting rail. Now adjust the end clamp to match the height of the module and tighten the screw (tightening torque 8-10 Nm). Ensure that the end clamp clamps the module frame over the clamping area defined by the module manufacturer (refer to Installation-5).



Install end clamp on the last module



Proceed as described for the following rows.



© S:FLEX GmbH 04/2024 Subject to technical modifications

3.1 Disassembly

Disassembly of the S:FLEX mounting system may only be carried out by trained specialist personnel. Observe the same safety instructions, standards and guidelines as provided for the installation. In general, disassembly is carried out in reverse order to the described installation.



Before disassembly, disconnect the PV modules from the mains network. Disconnect all of the PV modules' electrical cables (string lines and plug connectors) and remove them from the frame system.



Then remove the modules and store them safely. Improper disassembly can lead to damage to the modules.



Disassemble frame system and safely store all of the parts.
Any holes in the roof must be sealed by a specialist.

3.2 Disposal

The S:FLEX mounting system is made from aluminium, stainless steel and steel components. These materials can be recycled after disassembly. The frame system must only be disposed of by a specialist waste management company. Observe the applicable national standards and guidelines.

© S:FLEX GmbH 04/2024/ Subject to technical modifications

4.1 Agreement of use for clamps for standing seams

We point out that the assembly system is sold as part of a purchase agreement.
Installation/processing or its acquisition by a third party is not carried out in the name of, or on behalf of, S:FLEX GmbH. It must be undertaken by appropriately qualified personnel and strictly in accordance with the installation instructions.

The design and planning of the system must be undertaken using the S:FLEX Planning Software (Solar.Pro.Tool). S:FLEX GmbH is neither responsible for the project-specific structural analysis of the roof structure, nor for obtaining and documenting the consent of the roof manufacturer in respect of being able to use the relevant mounting system on the roof in question (in the terms of the warranty), nor for the correct installation of the mounting system.

S:FLEX GmbH will not be liable for faults and damage and/or a restricted or limited operational capability of the system which has resulted from defective installation and/or installation which was not undertaken in accordance with the installation instructions and/or the project report (Solar.Pro.Tool). In the case of improper installation, the buyer's right to assert claims for material defects shall expire.

The system warranty is only valid if all system components are acquired from S:FLEX GmbH.

4.2 Warranty / product liability (exclusion)

The information regarding dimensioning provided in these instructions are merely suggestions based on prior experience. Binding installation frame structural analyses can be create using the S:FLEX planning software (Solar.Pro.Tool).

As an installation company, you are responsible for the correct execution of the installation. S:FLEX GmbH is not liable for the dimensional information contained in commercial system quotations.

As the installation company, you are responsible for the mechanical durability of the installed interface connections on the building envelope, in particular also for their watertightness. The components supplied by the company S:FLEX GmbH are designed for the expected loads and in accordance with the technology currently available.
In this context, you must provide the company S:FLEX GmbH with information about all general technical conditions in writing via the project data collection sheet (information about the supporting structure, snow load zone, building heights, wind loads, etc.).

S:FLEX GmbH is not liable if the installed components are not properly handled. Any use close to the sea needs to be clarified with S:FLEX GmbH directly on a case-by-case basis due to the increased risk of corrosion. Provided that the system is handled properly and dimensioned according to the structural conditions and normal environmental and ambient conditions, the company S:FLEX GmbH provides a warranty from transfer of risk to the warranty holder, which guarantees that the metallic components of the racks will remain free from defects with regard to material and workmanship for a period of 10 years. This warranty does not apply to wear parts. For additional information, please refer to the separate warranty provisions.

This applies within the context of generally prevalent weather and environmental conditions.

© S:FLEX GmbH 04/2024 Subject to technical modifications