Solar systems from Schweizer:

Mounting instructions - MSP-PR pitched roof PV mounting system

Legend to mounting instructions

Observe additional information

SPT

click! Audible clicking sound

Caution: check carefully

Mounting direction of part

Correct operation

T30 / 10 Nm Tool type / required torque

Incorrect operation

Check potential source of error

Ernst Schweizer AG
Bahnhofplatz 11
8908 Hedingen, Schweiz
Phone +41 44 763 61 11
Fax +41 44 763 61 19
www.ernstschweizer.ch

Standards and technical guidelines

The Schweizer MSP-PR mounting system complies with the following standards, among others:

- EN 1090-1 Execution of steel structures and aluminium structures
  Part 1: Method of verification of conformity for load-bearing components
- EN 1090-3 Execution of steel structures and aluminium structures
  Part 3: Technical rules for the execution of aluminium structures
- EN 1990 Eurocode - Fundamentals of structural design
- SIA 261 Actions on structures

Intended correct use

The PV mounting system MSP-PR is suitable for mounting photovoltaic modules on pitched roofs. Any other use is considered improper. Proper use also includes compliance with the information in these installation instructions.
The instructions contained in the design documents must be observed.
Schweizer is not liable for damage resulting from non-compliance with the installation instructions, in particular the safety instructions, or from misuse of the product.

Responsibilities of the customer and installer

The operator of the facility or installation has the following safety-relevant responsibilities and, accordingly, is obliged to:

- Ensure that all relevant accident prevention and industrial safety regulations are observed.
- Ensure that the mounting system is only installed by qualified persons.
- Ensure that the persons entrusted with the work are in a position to properly assess the tasks and to identfy possible risks or hazards.
- Ensure that the persons entrusted with the work are familiar with the parts of the system.
- Ensure that the installation instructions are available during installation. The installation instructions form an integral part of the product.
- Ensure that the assembly instructions, and in particular the safety instructions, have been read and understood by the appointed personnel prior to installation.
- Ensure that locally applicable working and operating conditions or requirements are observed. Schweizer is not liable for damage resulting from exceeding these conditions.
- Ensure that the installation is carried out in accordance with the instructions and that the necessary tools are available for use.
- Ensure that the durability of the assembled connections and the correct fastening of the mounting system are guaranteed.
- Ensure that suitable lifting equipment is used at all stages of the installation procedure.
- Ensure that components with visible signs of damage are not used.
- Ensure that only original parts are used in case of replacement. Otherwise all warranty claims will be invalidated.
- Ensure that the function of the roof or its covering is not adversely affected (e.g. loadbearing capacity, structural soundness or weather sealing).
- Ensure that all local regulations, including those concerning earthing/grounding and equipotential bonding are checked and complied with.

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Basic safety instructions

The following basic safety and warning instructions are an essential part of these mounting instructions and are of fundamental importance for handling the product:

- Wear work clothes according to national regulations.
- Comply with applicable health and safety regulations.
- Ensure that all electrical work is only carried out by a qualified electrician. Comply with all relevant regulations.
- The presence of a second person who can provide assistance in the event of an accident is mandatory for the entire assembly process.
- Keep a copy of these mounting instructions within easy reach in the immediate vicinity of the system and ready for the installers.
- Until the PV system is fully completed and ready for operation, all incomplete sections, components and material must be secured in accordance with the applicable regulations.

Conditions of use

The conditions of use are defined in the technical statement.

The Schweizer PV mounting system MSP-PR is designed to withstand common loads caused by wind and snow. It is intended for the following areas of application:

- framed photovoltaic modules
- Roof covering: common interlocking tiles or roofing stones
- Roof construction: the possible roof pitch and rafter spacing depend on the load (snow, wind and module weight)
- Load combination: the possible load (snow and wind) depends on the roof construction (roof pitch and rafter spacing)

Preparations for mounting

1. Before the planned installation, check the suitability of the roof for mounting MSP-PR. The roof construction at the planned installation site must be suitable for mounting the solar mounting system. In particular, the roof construction must be able to absorb the forces occurring at the fastening points. The suitability must be checked by the customer on a project-specific basis and on site. The boundary conditions and assumptions of the statics must be checked on site by the customer.
2. Check the roof for damage. Clarify any damage and its repair before installation.
3. Check that the plans (incl. the assumption of the loads) correspond to the conditions on site. In case of deviation from the defined conditions of use, please contact the Schweizer Service before using the MSP-PR assembly system.
4. Cut the beam profiles according to the cutting list.
5. Observe the information on the mounting system structure and ensure that there are sufficient fastening points.
6. Determine the concrete position of the roof hooks in the direction of the rafters and battens so that the required number of roof hooks per module is not undercut according to the specifications in the technical statement (if necessary, draw up an installation plan).

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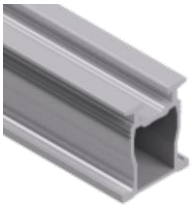
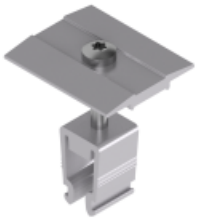
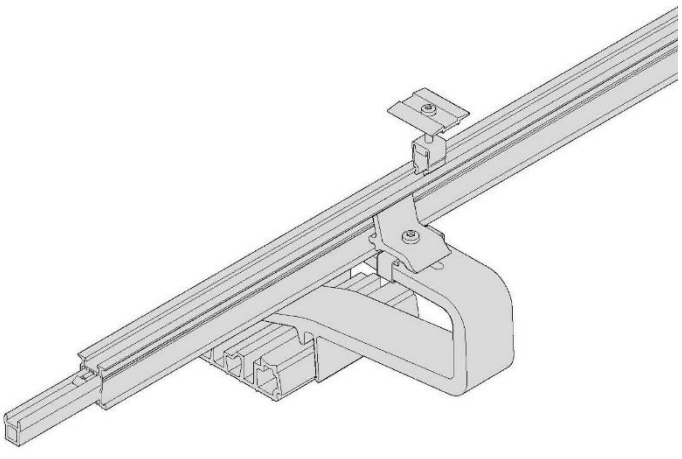
MSP-PR-BP height 39 mm MSP-PR-BP height 45 mm	MSP-PR-SP 10 mm	MSP-PR-HS TX40 8x100 A2 MSP-PR-HS TX40 8x120 A2
		
MSP-PR-RHF MSP-PR-RHA MSP-PR-RHC MSP-PR-RHL	MSP-PR-CH 3.3m MSP-PR-CH 4.8m MSP-PR-CH 6.3m	MSP-PR-SL
		
MSP-PR-EC TX30	MSP-PR-MC 28-45 mm MSP-PR-MCG conductive 28-45 mm	



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Mounting steps MSP-PR

MSP design documents

A technical statement, a parts list, a profile cutting list as well as notes on the assembly system design are provided for documentation purposes. It must be ensured that these documents as well as the assembly instructions for the PV mounting system pitched roof MSP-PR are available on the construction site and that those who are commissioned to carry out the work are fully familiar with the assembly arrangement.

Fig. 1: **Position the base plate on the rafter.**
Note: Check that it's positioned correctly at the right distance from the end face and top edge of the tile.

Fig. 2: **Fasten the base plate to the rafter.**
Note: Check that the screws are not too close to the edge of the rafter.

Fig. 2.1: **Ensure that the screws are driven to adequate depth**

Fig. 3: **Click the roof hook into the base plate.**
Note: Observe the maximum distance between the roof hook and the outer edge of the rafter. The roof hook must not protrude beyond the base plate.

Fig. 4: **Slide the roof tile over the roof hook.**
Note: The roof hook must be inserted between the tiles in a professional manner. Ensure that the function of the roof or the roofing is not impaired.

Fig. 5A: **Check that the distance between the roof hook and the tiles is adequate at all points.**
The tile must be able to lift up freely, e.g. it may not be fixed with concrete, for example.

Fig. 5B: **Adjust height-adjustable roof hook and tighten the screws to specified torque.**
Note: Check that the distance between the roof hook and the tiles is adequate at all points.
The tile must beable to lift up freely, e.g. it may not be fixed with concrete, for example.

Fig. 6: **Click the channel into position in the roof hook clamp.**

Fig. 7: **Tighten the roof hook clamp to specified torque.**

Fig. 8: **Push the channel connector into the channel.**
Note: For further information consider the IFU for the channel connector MSP-PR-SL.

Fig. 9A, 9B: **Click the module clamps into position in the channel.**
Note: Use a middle clamp (MC) for two adjacent modules. Otherwise use an end clamp (EC).

Fig. 10A, 10B: **Tighten the module clamps to the specified torque.**

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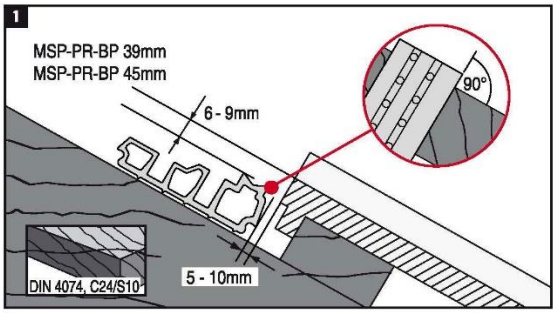
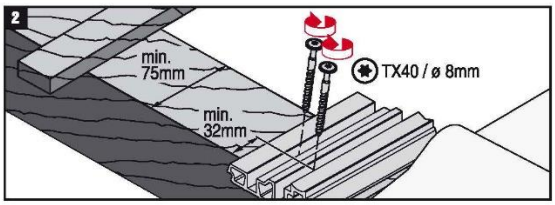
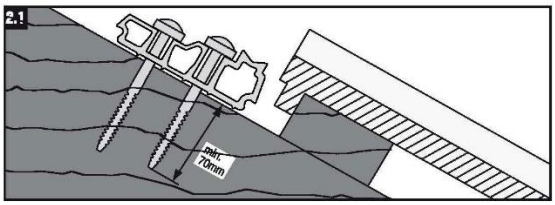
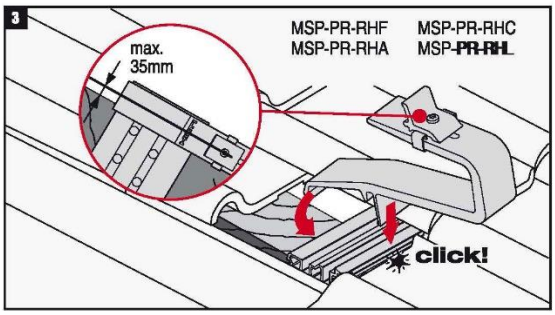
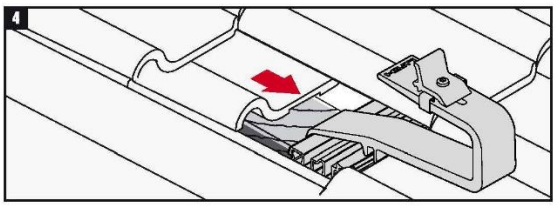
Mounting instructions – PV-mounting system pitched roof MSP-PR

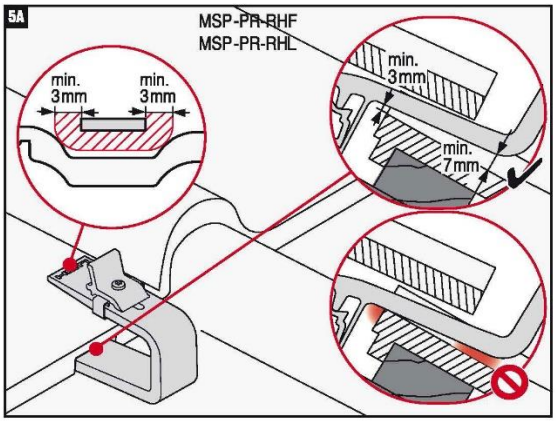


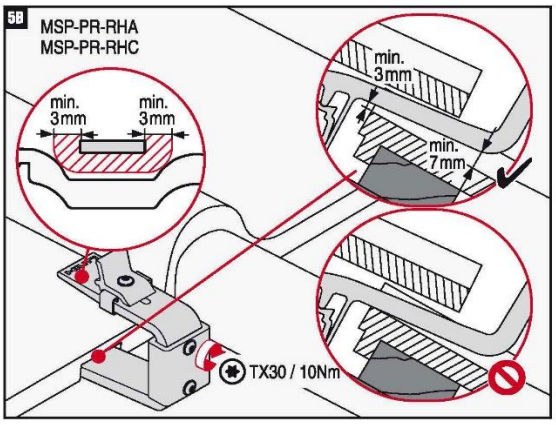


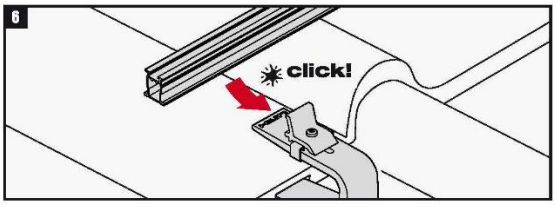


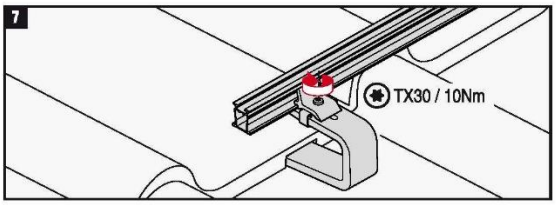


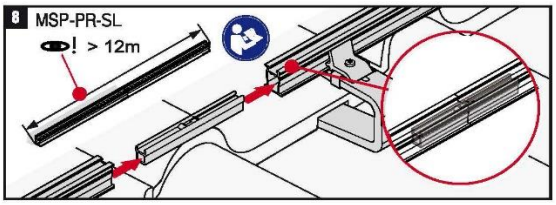


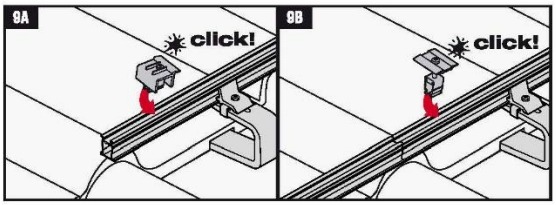


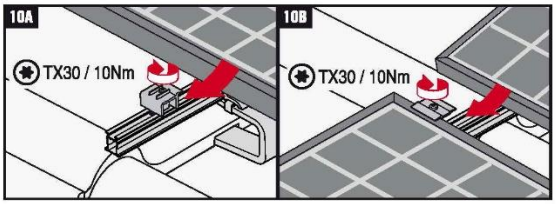












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Mounting steps MSP-PR-SL

Fig. 1: Push the rail connector into the rail up to the stop of the locking spring.

Fig. 2: Slide the second rail onto the rail connector.

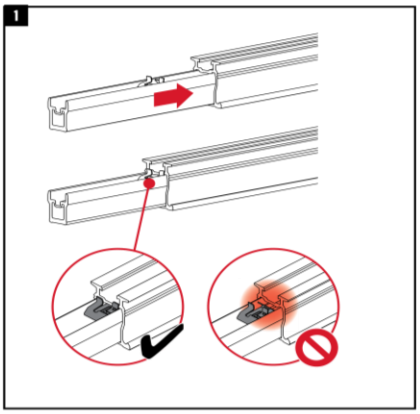
Fig. 2A: Fixed connection: push the second rail up to the stop of the locking spring.

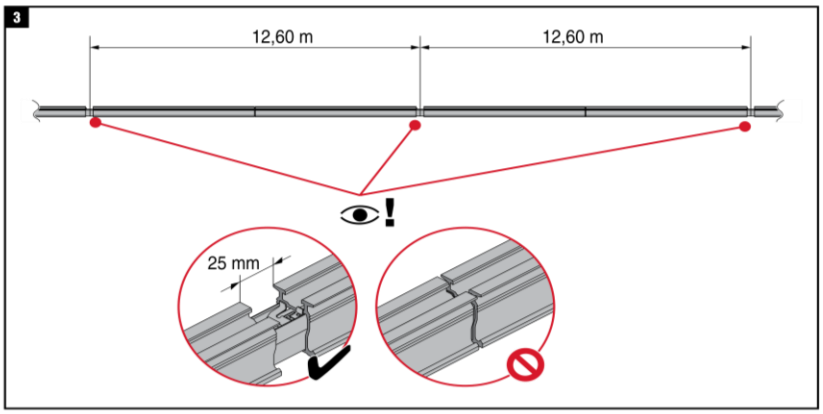
Fig. 2B: Movable connection: slide on the second rail at a distance of 25 mm from the first rail.

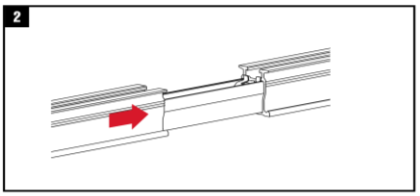
Fig. 3: There must always be movable connections at a distance of max. 12.60 m.

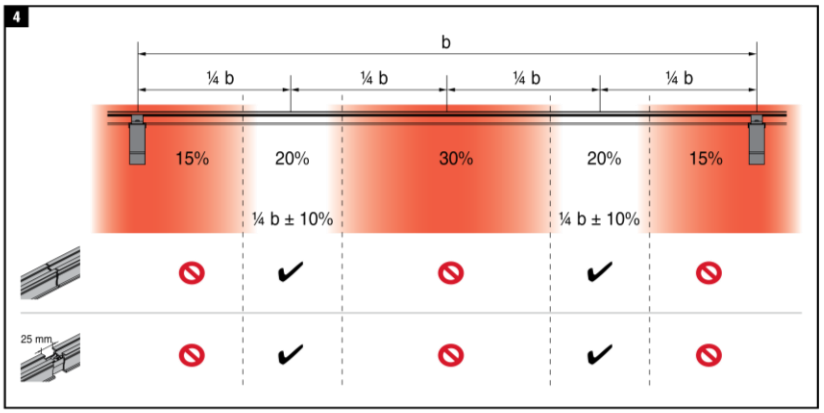
Fig. 4: The connections must be at the quarter point between two fixing points.

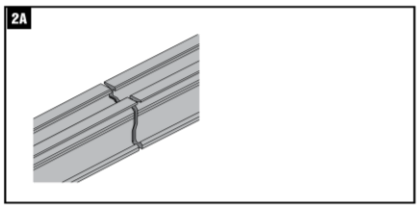
Fig. 5: Modules can be installed via fixed connections. No modules may be installed via movable connections. Two end clamps must be used here.

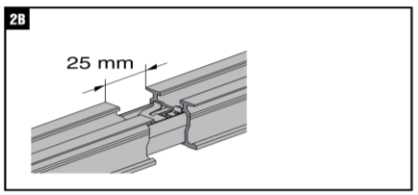


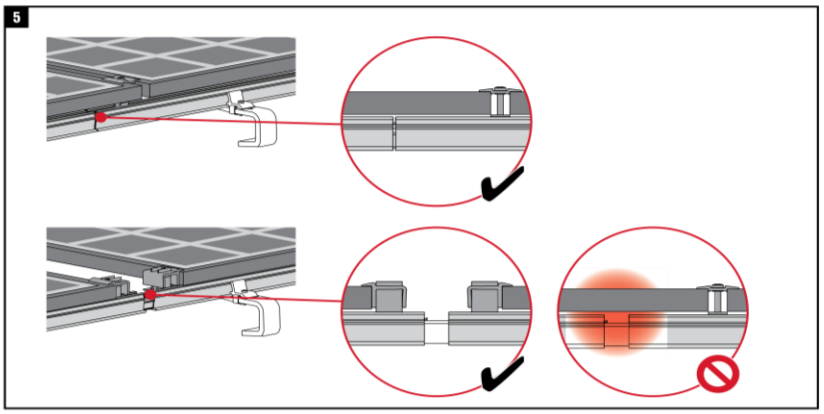












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