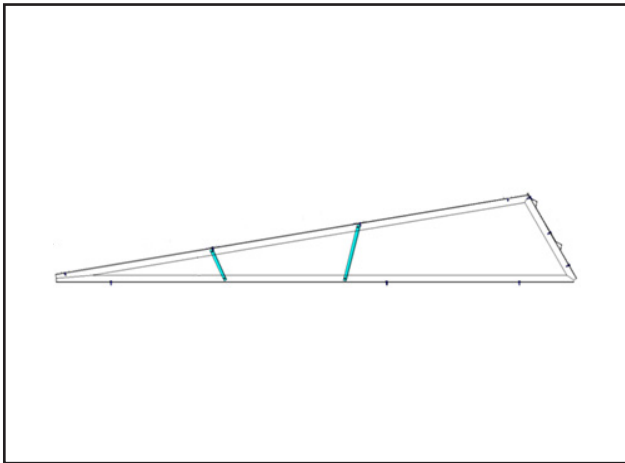


solarSTEP light[®] LS

Instructions manual - solarSTEP light[®] for frameless modules

Please comply with the following general instructions:

1. Read this instructions manual carefully before starting with the construction;
2. Only solarSTEP certified staff are allowed to assemble the mounting system;
3. National security regulations and guidelines of all government safety organisations have to be applied strictly, in Germany for example the BGV A1 (General regulations) and the BGV A3 (Electrical equipment and operating resources);
4. Roofing standards of the respective national guild or government authorities have to be followed;
5. National electrical grid regulations have to be obeyed;
6. solarSTEP warranty regulations are applicable;
7. solarSTEP does not take any responsibility for solarSTEP mounting systems that are installed in bad weather periods, especially when there is snow and ice on the roof.



module girder (mt)



west-and-ost-sheets (wb, ob), north-sheet (nb)



terminal-cross-beam (qe), middle-cross-beam (qm)



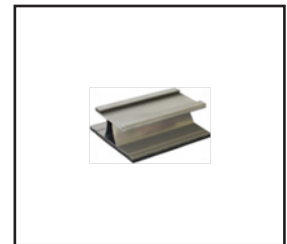
middle stand (mf)



south stand (sf)*



north stand (nf)*



support base (stf)



ECO 6/8



GS 50

centre clamp (mk)



ECO 6/8

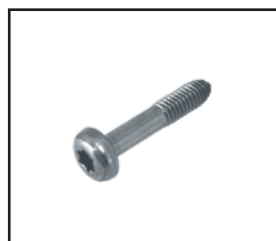


GS 50

terminal clamp (ek)



screw (s16)



screw (s30)



washer (us)



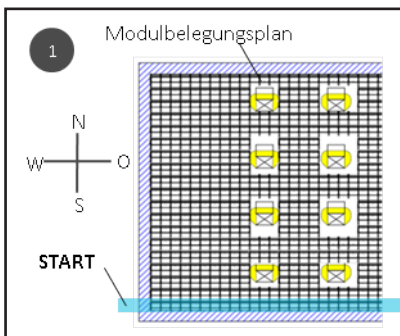
optional: cable tie (kb)



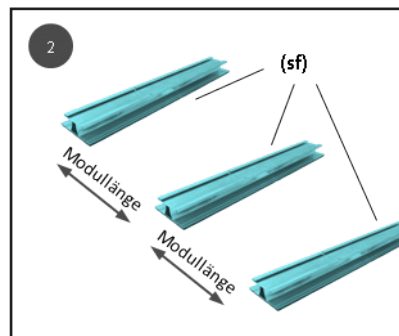
electric screw-driver, Bit-extension, Bit

* Attention: north stand (nf) and south stand (sf) are almost identical parts, whilst the north stand (nf) is shorter than the south stand (sf).

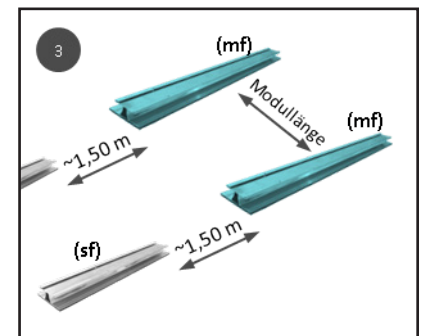
General Information: For safety reasons, we recommend to wear protective clothing. Always make sure to comply with all national regulations regarding health and safety measurements. Make sure that the electricity cables are not damaged.



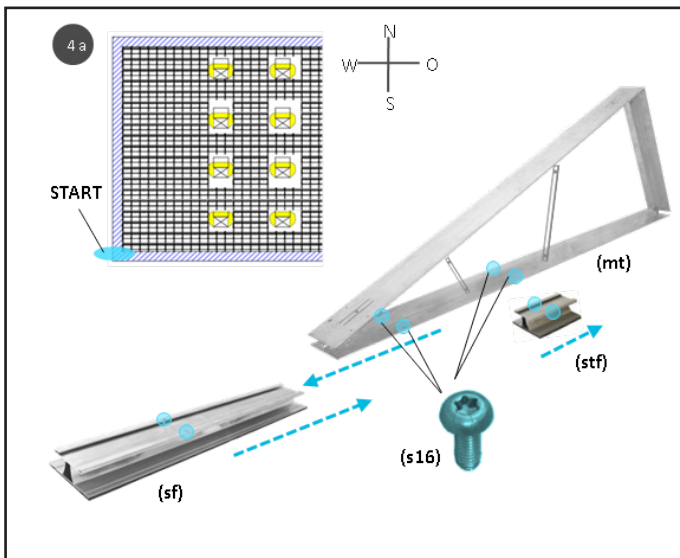
Make sure not to damage the roof membrane during assembly. Start the installation in the **southernmost** row of modules of the module building plan.



The **south stands (sf)** are distributed in the module row in east-west direction so that the distance between the **south stands (sf)** equals about the length of one module.



The **middle stands (mf)** are placed north of the **south stands (sf)** at a distance of about 1,5 m.

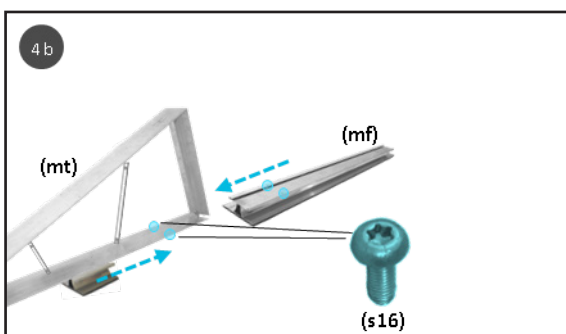


On the **western side** of the module row, push the **support base (stf)** on the **module girder (mt)**. Push the **module girder (mt)** far enough into the **south stand (sf)** until the screw holes of both parts are matching. Then screw in two **screws (s16)** with electric screw driver.

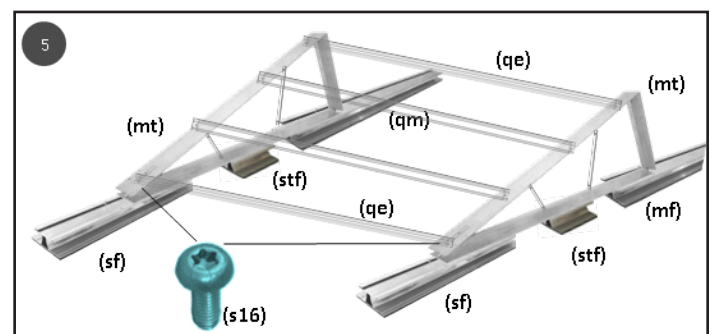
Important:

All fittings must be screwed in all the way with a preset torque of **8 Nm** using the electric screw-driver. This parameter must be verified with a **torque wrench**.

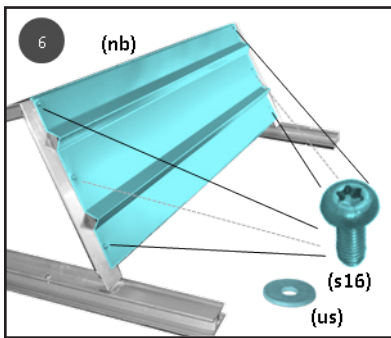
For simplifying the installation with an electric screwdriver the use of **bit-extensions** (length: 10 cm) is recommended.



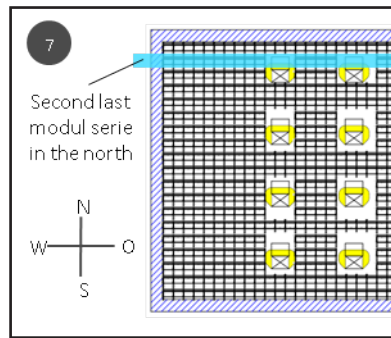
Immediately after **step 4a**) push the **module girder (mt)** into the **middle stand (mf)** until the screw holes are congruent with each other. Then drill in two **system screws (s16)** with the electric screwdriver. **Repeat steps 4a and 4b** in west-east direction up to the **last module girder (mt)** in this row.



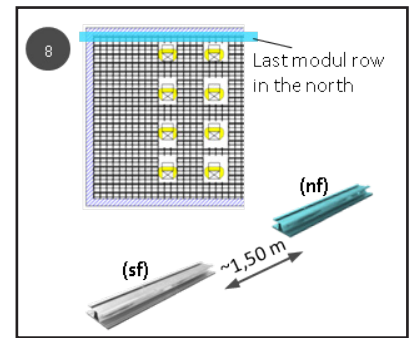
Now connect the **module girders (mt)** in west-east direction with the **terminal-cross-beams (qe)** and – depending on the 2 or 4 module system – with one or more **middle-cross-beams (qm)**. The middle-beams are screwed to the **module girders (mt)** with one system screw (**s16**) on each side.



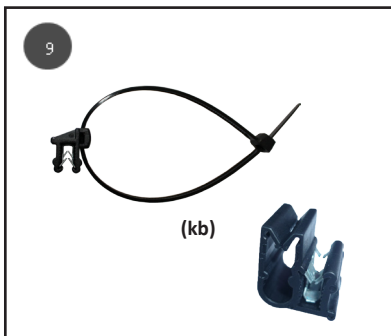
The **module girders (mt)** are connected on the north side by mounting the **north sheets (nb)** in west-east direction: The **north sheets (nb)** are screwed in the pre-fabricated holes with four (optional six) **system screws (s16)**. The module block must now stand fully rectangular.



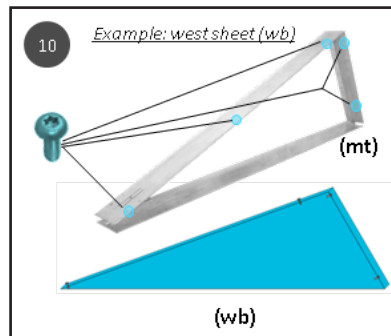
Repeat steps 2 – 6 in the same sequence up to the **second last module row** in the north.



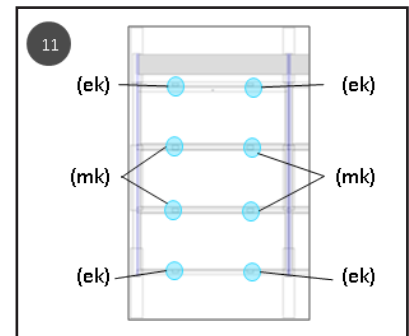
In the **northernmost module row** also repeat steps 2 – 6; **Attention in step 3:** Instead of the **middle stand (mf)** place the **north stand (nf)**.



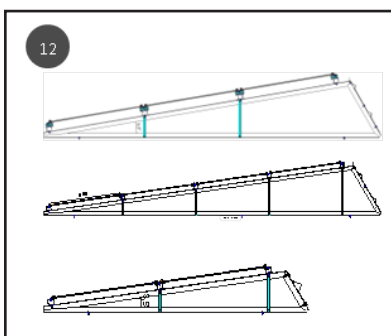
After finishing the assembly of the mounting structure attach string cables to the mounting structure where necessary. **Recommendation:** solarSTEP recommends to fix the cables with special **cable ties (kb)**. The cable ties are an optional equipment for solarSTEP light.



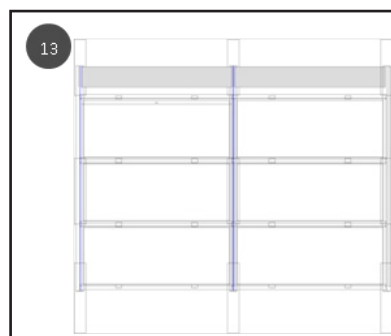
The **west sheets (wb)** and the **east sheets (ob)** are screwed in the prefabricated holes with five **system screws (s16)** at the end of each module row.



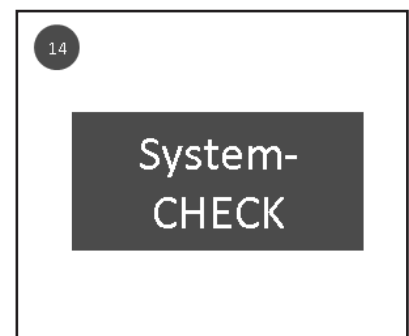
Once, all string cables are attached to the mounting structure the photovoltaic modules are mounted on solarSTEP light with **centre clamps (mk)** and **terminal clamps (ek)** using the **system screws (s16/s30)**. Always comply with installation instructions of the module manufacturer.



Attention: the mounting system solarSTEP light LS is available in two standard-versions: 2-module-version and 4-module-version. Furthermore, also for larger formats: LS-modules (please look for further information in the data sheet). Please adapt the preceding mounting steps accordingly.



Important: Always comply with installation instructions of the module manufacturer.



Finally **all** screw connections must be checked. Before putting into service of the photovoltaic plant, the entire system must be checked for correct assembly. Make sure that the installation criteria for all the components (modules, inverters, etc.) are met before the start of operation of the photovoltaic plant. Further-more, make sure that the entire system complies with all the national regulations.