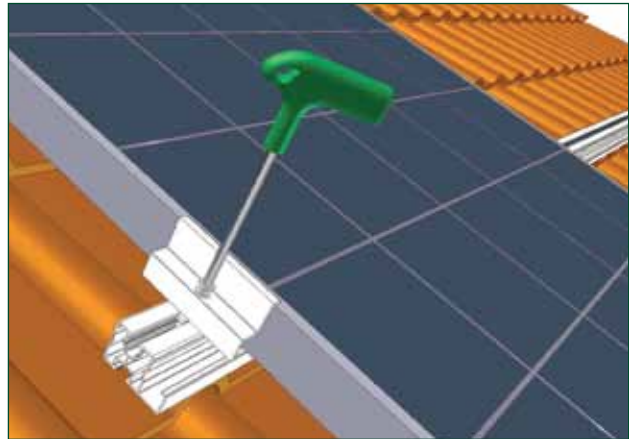


Module mounting

General information



As there are more and more photovoltaic plants, mounting details are getting ever more important besides electric parameters, warranty periods and durability. In the early days of photovoltaics, only small numbers of modules were installed on roofs, but now there are numerous mounting options for all kinds of roofs up to big-surface roofs of industrial buildings or installations in open areas. The increasing number of solar installations results in a certain statistical rise of damage cases. Thus, insurance companies are trying to gain more influence on the quality standards of solar plants.

Unfortunately, there are only very few electrical and mechanical standards that determine how the installer has to carry out an installation according to the norms. Only if there are exact specifications and standards, the installer can pass on the liability risk to the producer. This compilation is supposed to inform about unsolved problems and to pave the way for binding standards in the future.

1 Problems in today's module mounting: A few examples

Many producers still (as for autumn 2008) have no realistic concept of the fastening of modules to the substructure. By now, some module producers have taken action and have issued accordant mounting instructions, other producers are at least working on accordant instructions.

The following examples highlight some problems that have not been given much attention until now.

1.1 Module fastening

Most modules have holes at the back side that are intended for screwing the module to the substructure. In reality, these fastening holes cannot be used, because in case of numerous modules, they are simply not accessible when the modules are mounted. Moreover, mounting with many little screws at the lower side of the module is almost impossible on the roof and hardly affordable in view of the mounting time that would be required.

So the mounting holes are not utilized in virtually all mounting variants. Nevertheless, many module producers still refer to mounting holes as the only reliable kind of fastening. Thus, the installer virtually has to bear the complete liability risk when mounting.

