



Sunpark Greenhouse

Double use of Solar energy



Greenhouse renovations

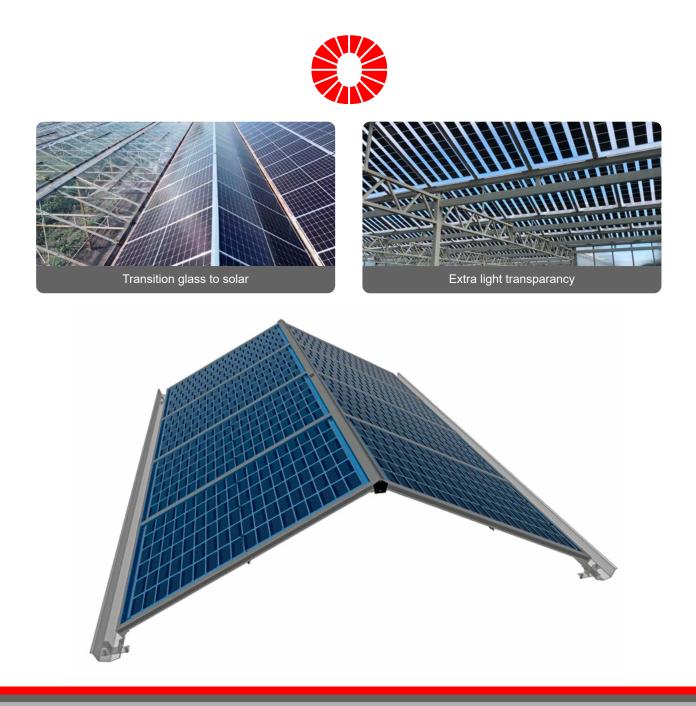
With the Robisol Sunpark Greenhouse systeem standard solar panels are applied on standard greenhouses. In production greenhouses where a lot of chalking is required or a new use is envisaged, it is a logical step to integrate solar energy into the roof structure. To ensure that the risk of glass breakage and damage is minimised, the Sunpark Greenhouse System offers a strong and reliable construction. Here, no old and potentially damaged roof system is reused, but a new roof system is supplied that is calculated according to the heaviest wind and snow loads. This alows that also the half-glass sections can be replaced by full-sized solar panels.



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The gutter and substructure

When renovating a greenhouse, it is important that the existing gutters and substructures meet the requirements. When reïnforcements are required, they can often be realised by the greenhouse builder or our mounting team.

Older greenhouses often have steel gutters. Robisol has connection profiles for gutter types APD, AP, HI and AC. Newer greenhouses usually have aluminium gutters. Robisol has cover profiles that fit on many types of aluminium gutters. It can also be an option to use our High Load aluminium gutter to allow higher snow loads or larger section sizes.







Examples of solar panels

Roof size (gutter c.t.c. Power Light transmission Composition Size Fire class Wind load Snow load Product warranty Output warranty 4.00m 535Wp 6% 132 cell glass-glass 2094x1134x30mm C (A on request) 2400Pa 5400Pa 15 year 30 year linear

3.20m 450 Wp 6% 108 cell glass-glass 1722x1134x30mm C (A on request) 2400Pa 5400Pa 15 year 30 year linear 3.20m 400Wp 20% 96 cell glass-glass 1722x1134x30mm C (A on request) 2400Pa 5400Pa 15 year 30 year linear

The PV Modules

The Sunpark Systeem is suitable for almost all types of solar panels. The choise is often made by the customer. If you work together with investors or large scale installers, the modules are often bought by them. In such cases Robisol for example provides the mounting system and the mounting of the roof while the installer takes care of the PV installation. As Solar panels always provide a bit of light transmission, also glass-foil modules provide a friendly indoors, but are ofcourse less suitable for growing crops.

If you want to retain light transmission, glass-glass panels with extra space between the cells can provide an even lightdistribution in the greenhouse. Together with LED support, screening and climate control a high-end production facility can be created that is similar to the principles of the semi-closed greenhouse.





Practical benefits

The Sunpark systeem is developed as an alternative for open-field sturctures. With a more friendly use of space, greenhouse owners can often find a double business model while contributing to sustainable energy.

Advantages provided:

- High Energy production per square metre;

- **Cooling** of the solar panels through natural ventilation;

- Strengthening the roof structure with minimal risk of glass breakage;

- A watertight roof that mounts on existing gutters and drainage;
 - Integrated electrical management for maximum efficiency.