Robisol®

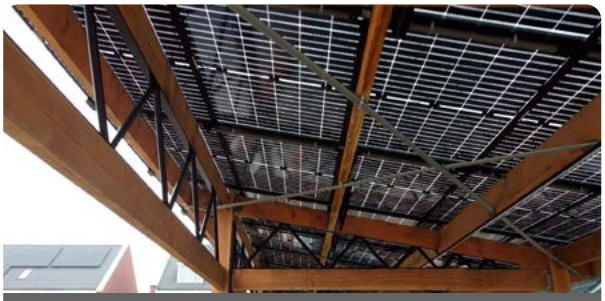
Solar panels as roof

Sunspan

The Sunspan System enables solar panels to be used as a fully functional roofing solution. The result is an aesthetic and functional roof with a high level of watertightness and controlled natural daylight transmission.

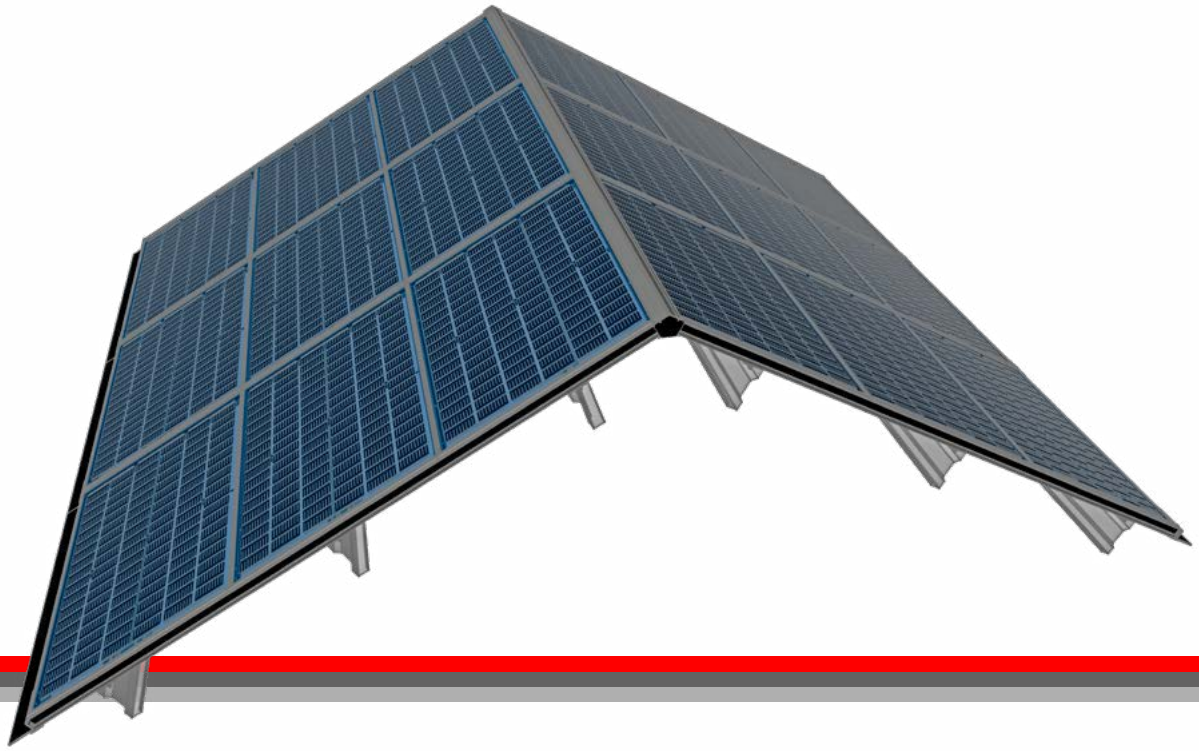
The structure consists of robust aluminium profiles mounted directly onto the purlins. High-quality sealing systems ensure reliable waterproofing, allowing large roof areas to be fully covered with solar panels.

In combination with ridge elements, cover caps and gutter components, the Sunspan System forms a complete roofing solution for pitched roofs, such as mono-pitch and gable roofs.



Installation on timber purlins

Installation on steel purlins



Building Standards & Structure

The Sunspan System is designed and structurally calculated in accordance with the applicable Eurocodes (EN 1990–1999) and forms an integral structural part of the roof.

Load transfer is achieved through the profiles onto the underlying purlins, allowing seamless integration into both new and existing roof structures.

For applications in wind region I (based on Dutch conditions), the following guidelines apply:
• Landscape orientation: up to approx. 10 m building height – purlin spacing approx. 1.85 m
• Portrait orientation: up to approx. 30 m building height – purlin spacing approx. 1.55 m

For projects outside these parameters, a project-specific structural assessment can be carried out. Depending on wind region, panel type and purlin spacing, additional configurations may be possible. Local conditions and national regulations must always be taken into account.

Light transmission – PV panel – 1762 × 1134 × 30 mm

PV cells	54	48	42	36	32	24
PV power	± 460 Wp	± 405Wp	± 355Wp	± 305Wp	± 270Wp	± 200Wp
Light transmission	± 6%	± 16%	26%	37%	44%	58%

Solar Panels

The Sunspan System is standardised for solar panels of 1762 × 1134 × 30 mm, but can be adapted to other panel dimensions. Virtually all common solar panels can be applied.

When using a closed panel, for example with a white backsheet, a limited level of daylight transmission remains (± 0.5%), maintaining visibility beneath the structure. With a transparent backsheet, daylight transmission increases (± 6%).

For project-specific solar panels, the level of light transmission is determined by the number of PV cells and the panel configuration.

In most applications, a pleasant daylight experience is already achieved using standard solar panels with a transparent backsheet.

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Carport

Atrium

Annex

Wide-span greenhouse

Applications

The Sunspan System is suitable for a wide range of pitched roof structures with purlins and frames.

Typical applications include:
- industrial buildings
- logistics centres
- agricultural buildings
- canopies
- roof renovations

The combination of energy generation and daylight transmission makes the system particularly suitable for buildings where functionality and spatial quality are both important.

Due to its non-insulated nature, the system is less suitable for heated spaces such as residential buildings and offices.