GMS® DOUBLE

- / Maximum electricity yields due to complete ground coverage
- / Double use of the ground, e.g. as an Agri-PV plant
- / Structural crop protection: Safeguards against weather extremes

MKG GŐBEL

GMS® DOUBLE

The GMS® DOUBLE mounting system redefines the concept of space utilisation. Due to its raised design without row spacing, it uses 100% of the ground and thus provides plant operators with highest area yields. Furthermore, the raised construction allows additional (e.g. agricultural) use of the ground beneath the modules. This makes GMS® DOUBLE an interesting Agri-PV solution.

For the use of the ground area, there is a great variety of approaches: Plantations of berries and fruit trees, animal farming, storage areas, car parks, built-over floodplains, etc. GMS® DOUBLE adapts to the desired use with customised post spacing and heights, with the desired amount of light transmission and individual module inclination. MKG GÖBEL will design the system to meet your project-specific requirements.

THE BENEFITS AT A GLANCE

/ Maximum electricity yields

GMS® DOUBLE doesn't need any spaces between rows or maintenance walkways. Instead, the entire surface area can be used. This makes it possible to achieve over 650 kWp/acre / 1.6 MW per hectare.

/ Profitable electricity yield curve

When aligned east-west, GMS® DOUBLE allows longer electricity production on summer days than south-facing systems. The daily yield curve is wider and flatter, the midday peak less pronounced.

/ Double use of the ground

Distances between poles of 3 to 5 metres (depending on the modules), 2 to 4 metres of clear headroom: There is a lot of space under the GMS® DOUBLE system, which can be used in many different ways.

/ Structural crop protection

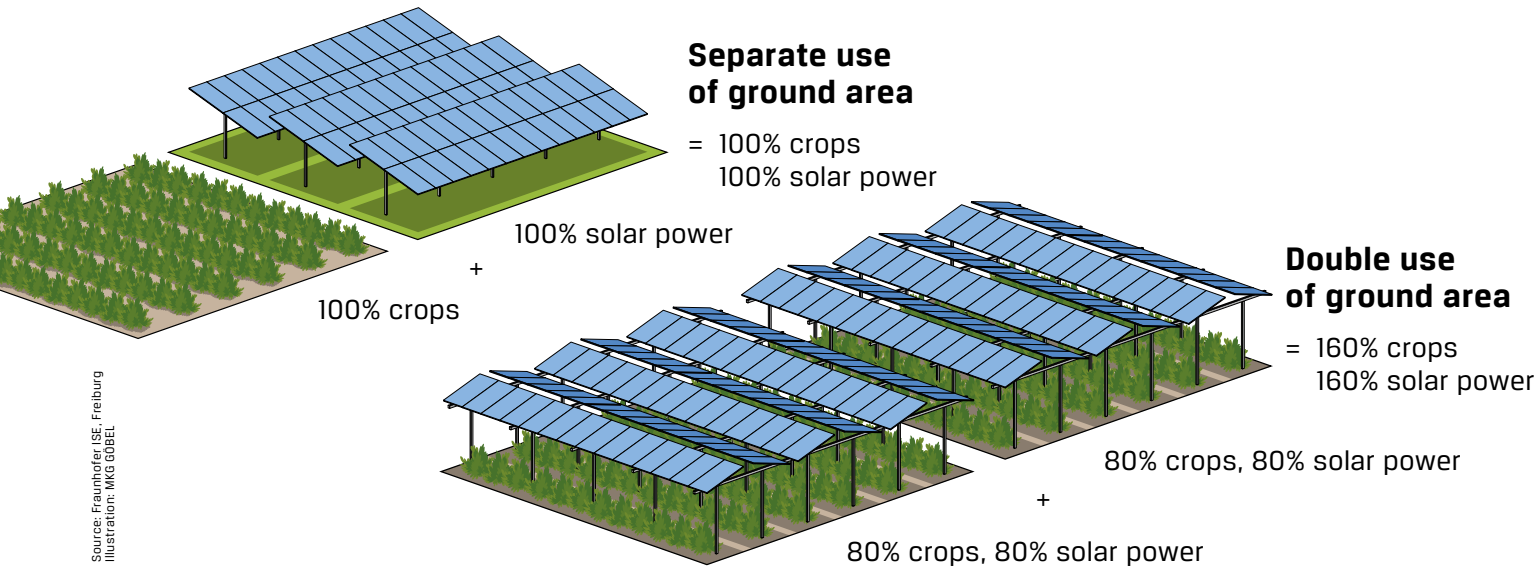
For agricultural use (Agri-PV), the roof protects against weather extremes (heavy rain, hail, excessive sunlight). GMS® DOUBLE can thus replace foil tunnels or greenhouses. Even watertight roofing is possible.

/ Control of the light conditions

With an east-west orientation, the light moves across the ground during the course of the day. The quantity of transmitted sunlight can be regulated by module row spacing, and can be further increased with semi-transparent modules.

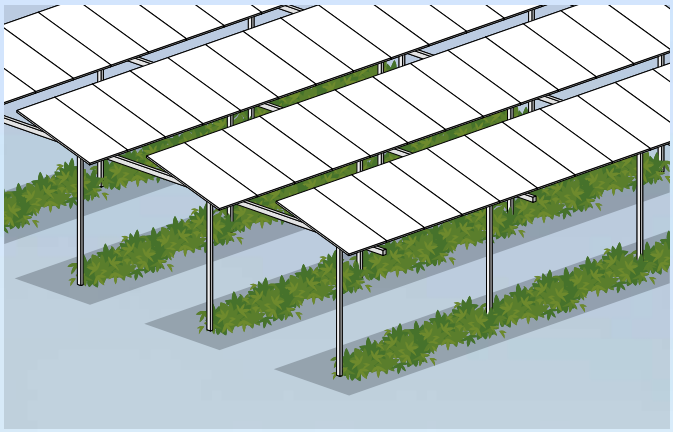
/ Economic benefit

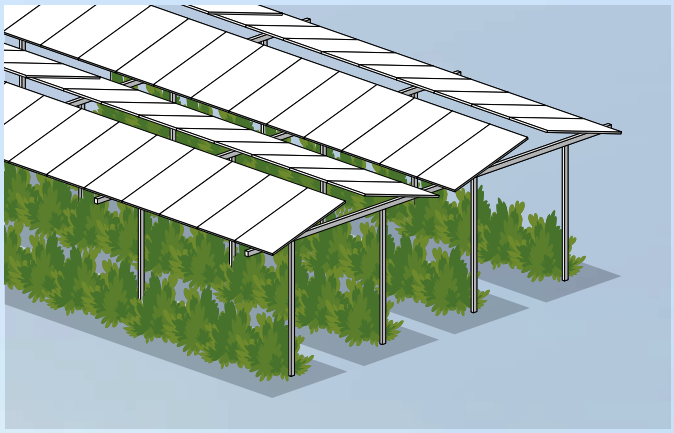
Particularly where land prices are high, GMS® DOUBLE can deliver tangible benefits. By producing more electricity than other systems. And by providing space where needed below the PV modules.



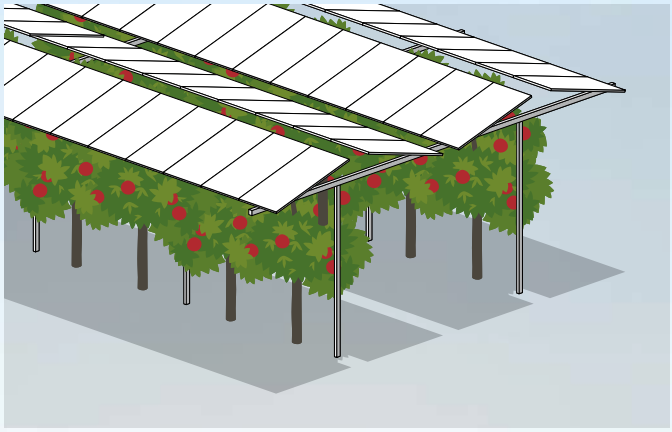
Source: Fraunhofer ISE, Freiburg
Illustration: MKG GÖBEL

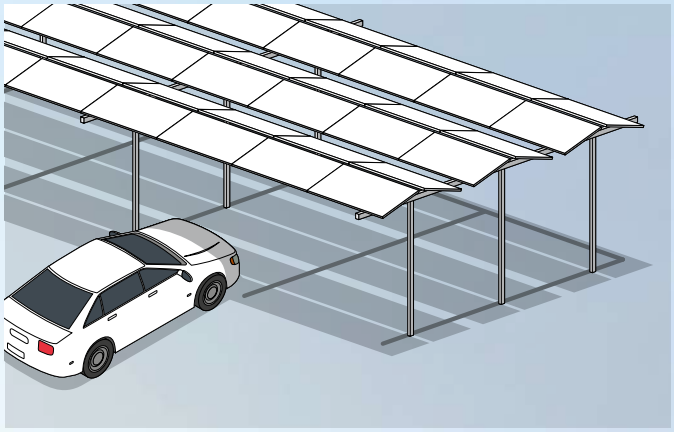
SYSTEM VARIANTS





Modules-over-Plants (MoP) in south or east-west orientation



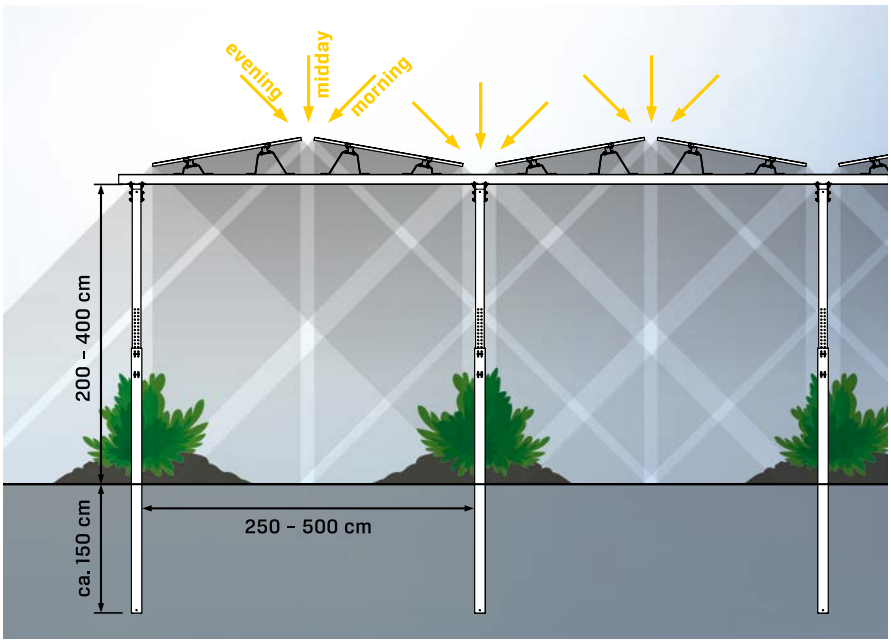


GMS® DOUBLE east-west installations, customised for different use of ground area

TECHNICAL DATA

System	GMS® DOUBLE
Construction	• Modular system, optimised for raised design • Split posts for height compensation, adaptable to the terrain • Sloping terrain up to 5% (higher on request)
Material	• Posts: hot-galvanised steel (batch galvanised – EN ISO 1461) • Framework: hot-galvanised steel (batch galvanised – EN ISO 1461) • Purlins, heads, small parts: aluminium EN AW 6063 T66 • Fastening elements: stainless steel 1.4301
Foundation	Rammed posts, concrete foundation, or drill holes (in rocky ground)
Static calculation	Project specific, complies with DIN 1055, DIN 18800, DIN 4113, Eurocode DIN EN 1991, wind tunnel test
Type of modules	60, 72, 120, and 144 cells, framed and unframed
Module orientation	1 module vertically, 1 module horizontally
Modulneigungswinkel	Standard: 12° (andere Winkel auf Anfrage)
Angle of inclination	0 – 70 % (project-specific)

Technical data subject to change without notice



MKG GÖBEL

MKG GÖBEL Solutions GmbH

Pfaffenmühlweg 86
74613 Öhringen, Germany
Phone: +49 (0) 79 41-6 49 20-0
Telefax: +49 (0) 79 41-6 49 20-20
E-mail: info@mkg-goebel.de

www.mkg-goebel.de

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