

PEG[®]

Revolutionizing PV Mounting



Reaching the lowest cost of electricity with
simplified, rapid deployment, high-density mounting

IT'S NOT EPC,

The PEG® system is a revolution in the field of substructures for solar power plants with framed modules.

It is a simple and unique solution designed for East/West orientations. The PEG® system delivers the lowest possible levelized cost of electricity (LCOE) with a maximum efficiency of space, constant energy generation over the day and a large volume scalability.

The PEG® system significantly reduces both substructure supply and delivery as well as installation costs. Due to the lightweight construction no foundation is needed. The required material is reduced by over 75% compared to conventional systems.

Less material and a simple design lead to reduced labor costs and construction times. The PEG® substructure is the lightest, most efficient and most innovative system on the market. The steel rods of the PEG® substructure can also be installed with only a hammer drill. Substructures of our competitors are heavier and more expensive. Most of them need concrete foundations and heavy machines.

The substructure is at waist height and allows for ergonomic, convenient and fast installation.



Rod



PV substructure
conforms to
UL Std. 2703



Head plate

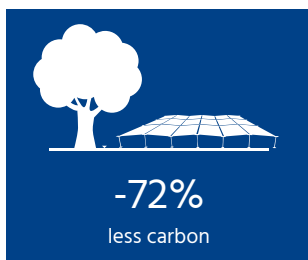


Down plate

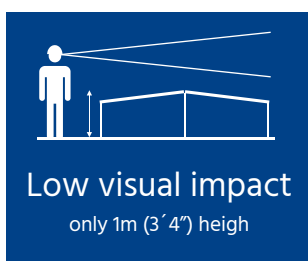


Base plate

ENVIRONMENTAL PROTECTION



ClimatePartner GmbH calculated the carbon emissions generated by the PEG® versus conventional system based on the Greenhouse Gas Protocol indicating the carbon footprint is 72 percent (61 tons CO₂/MWp) less versus a conventional fixed-tilt system.




The maximum construction height of the PEG® system is very low at 1 m (3.3 ft) compared to conventional racking systems. Ground penetration is only 0.4 to 1 m (1.3 – 3.3 ft) meters.

Low visual impact, minimal foundation depth and no concrete can greatly simplify the permit application process.

IT'S EPI

Engineering
Procurement
Installation


EFFICIENCY IMPROVEMENT



2.20 MWp*
per **one** 40 ft. container
for the substructure



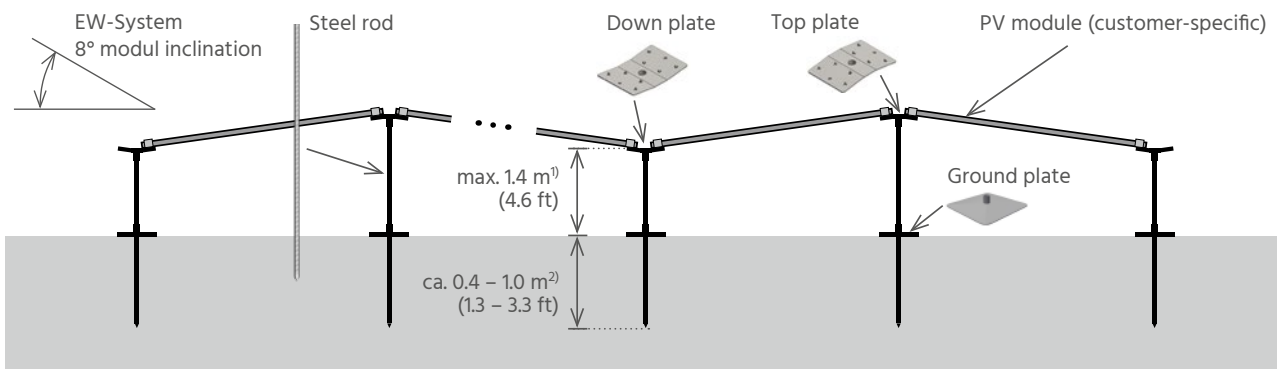
460 working hours*
per MWp
(2.2 kWp* per working hour)



1.85 MWp*
per hectare
(750 kWp per acre)

SIMPLICITY

- Robust & certified for tropical weather, high winds (298+ kmh, 185+ mph) and high snow loads (up to 50psf)
- Self stabilizing
- Low visual impact



1) subject to the site conditions and system design

2) For exceptional permafrost conditions, the ramming depth could be up to 2m, done by the use of two rods crimped together onsite through a sleeve, subject to project-specific approval.

COST REDUCTION

-90%*
machine costs



-50%*
logistic costs

PEG® system was formed with a simple goal in mind, to deliver electricity at lowest possible levelized costs of energy (LCOE), with best-in-class technologies, long-term reliability and large volume scalability.

The PEG® unit significantly reduces both substructure supply and delivery, as well as installation costs.



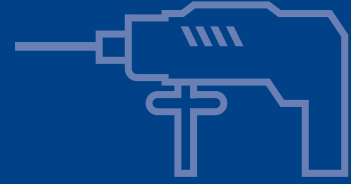
ENGINEERING

- High land utilization (97% GCR)
- Low visual impact
- Fully scalable from 10kWp to 100s MWs



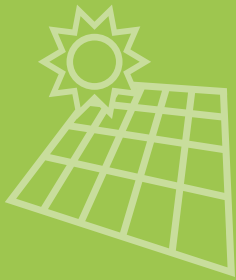
PROCUREMENT

- Significant CAPEX reduction (Supply and Logistics)



INSTALLATION

- No heavy machines
- No DC cable trenching
- No concrete foundations
- Simpler H&S procedures
- Low-skilled labor



OPERATION

- Consistent energy generation across the day
- Low ecological footprint
- Robust design
- Windproof



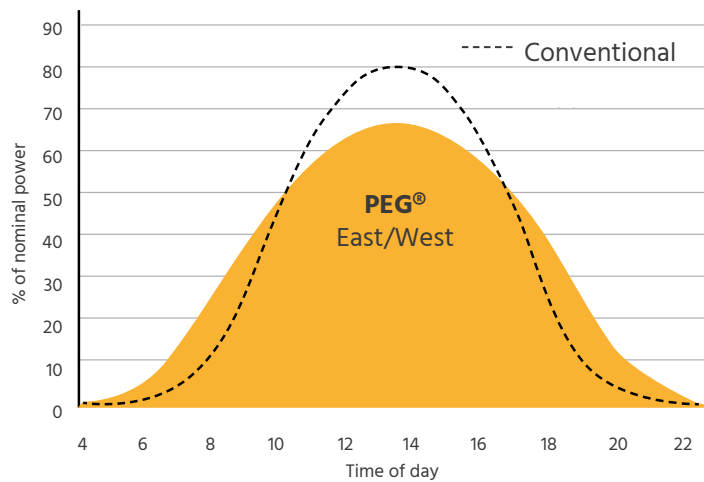
MAINTENANCE

- Cost-effective solutions for cleaning & landscaping



CONSISTENT GENERATION ACROSS THE DAY

Comparison of photovoltaic systems
of different orientation on a sunny day (8 July)



Production is closer to base line allowing for more consistent production throughout the day.

APPROVED MODULES

Most module suppliers are compatible with PEG[®].
All approved modules including UL certification
are available at www.jurchen-technology.com.



10.8MWp PEG[®] system at Queensland, Australia



Key data

- Extremely light substructure
- Innovative and simple system
- All components will be installed above ground
- Specialized aerodynamic proven design
- No concrete foundations required
- Safe installation

Technical data

Orientation PV array	Patented 8° East-West, fixed-tilt, aerodynamic proven
BOM (Bill of material)	1.1 rods and 2.1 clips per module
Large volume scalability	Any power plant capacity from 10 kWp to 100s MWp
Durability	Galvanized steel rods and plates All DC cabling components are weatherproof and UV resistant
Wind loads	Designed for 298+ kmh, 185+ mph wind; compliance TBD by local engineering per wind region
Snow loads	Designed for 50 psf snow load
Seismic loads	Significantly lower impact vs other racking systems
Certifications	Clamping approval from module manufacturers Wind load certificate by local engineering firm in accordance with local wind codes The PEG® substructure is UL certified.

Requirements

Land soil condition	Cohesive (e.g. sandy-clay, clayey silt) and non-cohesive soil (e.g. sand or sand-gravel).
Upper soil layer	No hard bedrock or underground infrastructure up to 1m below ground; rammed depth up to 0.8m
Site slopes	Up to 10° (17.6%) for sites without snow, subject to site conditions and system design.



Jurchen Technology GmbH
Prinz-Ludwig-Straße 5
97264 Helmstadt
Germany

E-Mail: info@jurchen-technology.com
www.jurchen-technology.com

* Explanation of key figures on page 3:

MWp/ha: Referring to the complete DC area, including the gaps between the DC blocks/tables

kWp/working hour: Time for complete installation of a PEG® solar power plant incl. inverter stations

MWp/container: Only the substructure

Machine costs: All machines required for the DC installation

Labor costs: Labor for complete installation of the PEG® solar power plant, incl. inverter stations

Logistic costs: Including machinery and labor, to the site and onsite

All figures assume ideal ground conditions, a min. 5MWp PEG system with 550W modules and may differ regionally.

PEG® Overview 2023_0714

Pictures: Jurchen Technology GmbH, Meralli Projects PTY Ltd, Belectric GmbH
All data may subject to alterations and errors.