

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.



PV substructure conforms to UL Std. 2703



Rod



Head plate



Down plate



Base plate

COST REDUCTION

- Compact substructure requires less materials reducing supply, logistics and installation costs by up to 40% compared to conventional alternatives. Case studies from Meralli sites show a bit more clear how much you'd save with PEG
- No DC trenching, no foundations, no concrete & minimal heavy machinery
- 225% improved land yield than traditional structures
- Demonstrated ability to deliver regional projects on time and on budget
- Ultra low profile blends in with surrounding environment = less pushback from neighbours
- 72% less CO2 compared to conventional substructures
- Contribute to regional sustainability by utilising local suppliers and labourers



IT'S EPI

Engineering
Procurement
Installation

EFFICIENCY IMPROVEMENT



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



460 working hours*
per MWp -
applies to PEG EW Standard
(2.2 kWp per working hour)

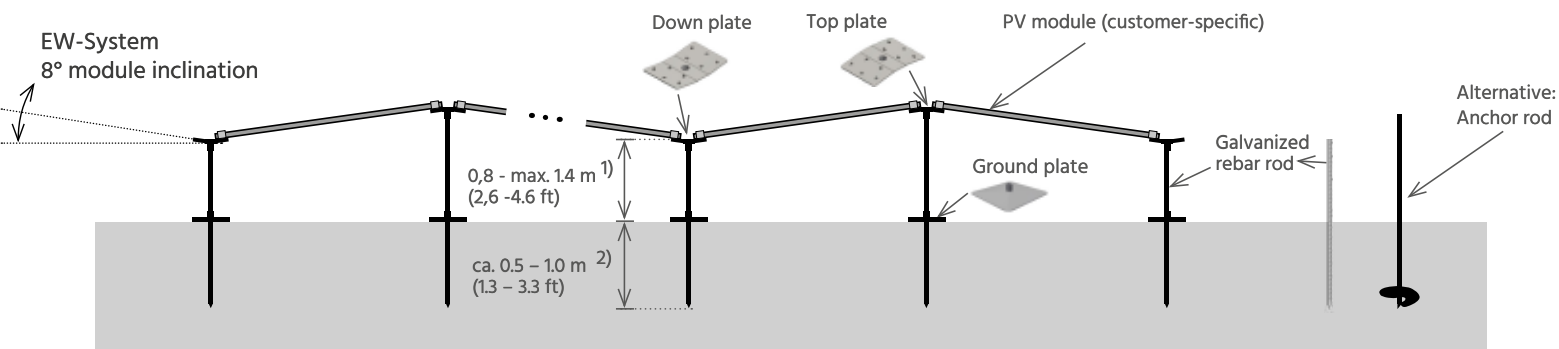


2.0 MWp*
per hectare
(811 kWp per acre)

SIMPLICITY

■ Robust & certified for tropical weather,
high winds (298+ kmh, 185+ mph) and high
snow loads (up to 50psf)

■ Self stabilizing
■ Low visual impact



2) Depends on the POT-values. 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. 1) subject to the site conditions and system design

ENVIRONMENTAL PROTECTION



-72%
less carbon

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.



Low visual impact
only 1m (3' 4") high

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.



ENGINEERING

- High land utilization (97% GCR)
- Low visual impact
- Fully scalable from 10kWp to GW+ scale

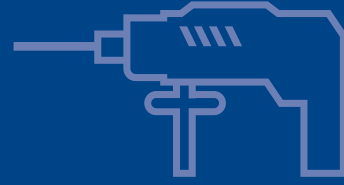


Scan QR-code & learn more about the efficient PEG design!



PROCUREMENT

- Significant CAPEX reduction (Supply and Logistics)

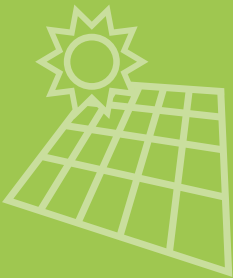


INSTALLATION

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



Scan QR-code & learn more about the simple PEG installation!



OPERATION

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



MAINTENANCE

- Cost-effective solutions for cleaning & landscaping

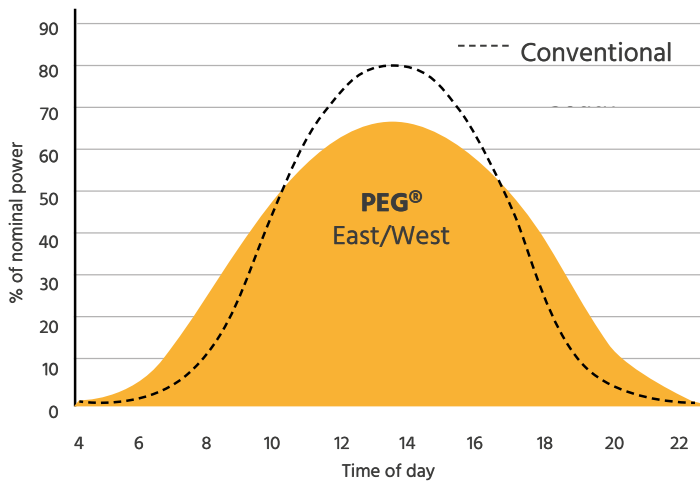


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CONSISTENT GENERATION ACROSS THE DAY

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.



Scan QR-code!



Australia

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). Rock (e.g. lime stone, basalt), pre drilling required.
Upper soil layer	Pre drilling needed if hard bedrock or underground infrastructure up to 1m below ground; rammed depth up to 0.8m. In case of soil contamination (e.g. ammunition, explosives or on landfills), use the ballasted PEG system!
Site slopes	Up to 10° (17.6%) for sites without snow, subject to site conditions and system design.

* Erläuterung der Kennzahlen auf Seite 3:

MWp/ha:	Bezogen auf den gesamten DC-Bereich, einschließlich der Lücken zwischen den DC-Blöcken/Tischen
kWp/Arbeitsstunde:	Zeit für die komplette Installation eines PEG-Solarkraftwerks inkl. Wechselrichterstationen
MWp/Container:	Nur die Unterkonstruktion

Maschinenkosten:	Bezogen auf alle Maschinen für die Installation des DC-Systems, im Vergleich zu einer konventionellen Unterkonstruktion
Arbeitskosten:	Arbeitsaufwand für die komplette Installation des PEG-Solarkraftwerks, inkl. Wechselrichterstationen, im Vergleich zu einer konventionellen Unterkonstruktion
Logistikskosten:	Alle Logistikkosten, einschließlich Maschinen und Arbeitskräfte, zum Standort und vor Ort, im Vergleich zu einer konventionellen Unterkonstruktion
Alle Zahlen gehen von idealen Bodenbedingungen und einer min. 5MWp PEG-System mit 550W-Modulen und können regional abweichen.	



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